HUMAN WELL-BEING IN RECREATION:

AN INVESTIGATION OF THE EXPECTANCY-VALENCE THEORY

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A

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Abstract

Over the past 50 years, numerous approaches exploring the recreation experience have offered a multitude of concepts and terminology, resulting in a debate over which best represent recreation behavior. This study adopts one of these approaches, the motivational approach, and explores its underpinning theory, expectancy-valence; addresses its limitations presented in the literature; and investigates the potential for the integration with other approaches. A modified analytic induction methodology was applied to address five hypotheses developed to address study questions. Longitudinal, qualitative data were collected through two separate interviews one week apart with 16 individuals that captured their thoughts regarding their recreation activities. A codebook was developed and a kappa statistic revealed an acceptable (K = 0.61 to 0.80) level of inter-coder reliability. Codes were developed based on constructs from the expectancy-valence framework prior to examining the transcripts. Evidence of these codes in the transcripts provided support for the theory. Consistent with modified analytic induction, some hypotheses were confirmed, while one was modified when evidence to the contrary was found. Further examination of the data revealed the potential for integration of other approaches.

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Chapter 1 Introduction

1.1 Purpose of Study

Much of outdoor recreation is provided by public funding, and with the current pressures regarding the federal budget, justification for this funding is more important than ever. Despite this importance, the field of recreation research has yet to establish a widely accepted method of measuring and presenting what benefits recreation provides to the public. This shortcoming could be due in part to the multiple approaches and subsequent terminology employed by the field.

While categorizing these multiple approaches has been difficult, they are frequently distinguished by the ontology of the research and the theories investigated. Using multiple research approaches has the ability to enhance our understanding of recreation behavior (Miller et al., 2008; Patterson & Williams, 2005); however, the magnitude of the number of theories and complicated terminology can also create confusion. Furthermore, researchers have criticized and emphasized the limitations of other approaches (Arnold & Price, 1993; Malm, 1993; Patterson, Watson, Williams, & Roggenbuck, 1998). This literature has focused on distinguishing one approach from another and has lacked an explanation of how one approach might complement or integrate with another.

The complexity of the theories and terminology as well as the nature of the debate has hindered rather than advanced recreation research as Kyle, Mowen, and Tarrant (2004) explain, "Unfortunately the diversity of conceptualizations and operations has the potential to obstruct our understanding of human motivation to interact with

various environments and to understand how these motivations affect their attitudes and behaviors related to these environments" (p. 451). The present study aims to investigate whether these approaches are, in fact, mutually exclusive and to look for evidence in support of their integration and for potential collaboration in future research. To accomplish this, a motivational approach was selected with the goal of addressing its limitations and investigating potential integration with other approaches.

The motivational approach, which refers broadly to the study of peoples' motivations in recreation, is one of the oldest in the study of the recreation experience (Driver & Brown, 1976). Due in part to its longevity many studies over the past four decades have adopted this approach. The application of the expectancy-valence theory, developed in industrial psychology (Vroom, 1964), has been a central component of this approach. This expectancy-valence theory presents a model in which an unmet psychological need results in a motivation to participate in an activity (Figure 1.1). The satiation of this need is then the satisfaction or benefit of recreation. This model provided the theoretical framework for the development of the Recreation Experience Preference (REP) scales (Driver, 1983). The REP scales have been one of the most widely used quantitative scales in the measurement of the recreation experience. Despite this level of uptake in studies Manfredo, Driver, and Tarrant (1996) explain that "While this provided a useful framework for describing relationships, it should be noted that the expectancy-valence framework never materialized as a strong focus of empirical investigations" (p. 190). Therefore, it appears that while there has been a great deal of research regarding the measurement of the recreation experience from this approach, more research is still

needed with regard to testing the application of the model of human behavior it represents.

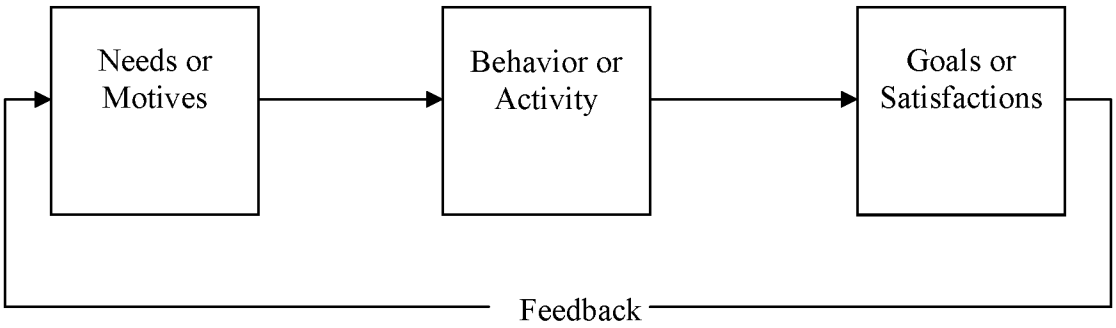

Figure 1.1 Basic Motivational Model from Mannel & Kleiber (1997)

1.2 Study Hypotheses

The development of the hypotheses was guided by the expectancy-valence framework (Figure 1.1) (Driver & Brown, 1976; Mannel & Kleiber, 1997) and by limitations of that framework described in the literature. As a whole the hypotheses describe a narrative of the recreation experience consistent with the expectancy-valence framework and the motivational approach.

1. Individuals do form motivations a priori to the recreation experience,
2. However, the actual experience, and realization of these benefits do possess emergent and contextual qualities,
3. The failure to meet psychological outcomes, yet be satisfied with the recreation engagement, is explained by the feedback mechanism of the expectancy-valence theory,

4. Previous experience with the activity or setting will lead to greater certainty about outcomes and increase expectancy-outcome consistency, and
5. Individual recreation outings[1] fit into a larger network of desired end states and the realization of goals from a specific recreation engagement are critical to the fulfillment of enriching one's life and well-being.

The structure of this thesis follows chronologically the logical process taken by the research. Chapter One introduces the study purpose and focus and presents the hypotheses. In Chapter Two, background information is presented regarding the different approaches and concepts relevant to this thesis. Limitations of the motivational approach are examined and the hypotheses are reviewed in-depth. Chapter Three describes the concept of the study methods and the process of developing an appropriate method to address the hypotheses through several pilot studies. Following the pilot studies qualitative data were collected through interviews and analyzed by modified analytic induction. The results are presented in Chapter Four, followed by a discussion of the implications of the results in Chapter Five.

[1] The term "recreation outing" refers to a specific, individual recreation experience and is not limited to outdoor recreation activities.

Chapter 2 Study Background

2.1 Introduction

With the creation of the National Parks in the early 20th century and the rise in popularity in outdoor recreation following World War II, the need for research in the recreation field became evident (Manning, 1999). In an attempt to better understand the recreation experience researchers have taken a variety of different approaches (Borrie & Birzell, 2001). Through a careful review of the literature, three major approaches were identified: a motivational approach, an optimal experience or multiphasic approach, and a meanings-based approach (Table 2.1). These approaches were categorized based on three criteria: the ontological commitments of the research paradigm (Patterson & Williams, 1998, 2005), the theory investigated in the study, and the methods applied by the researcher.

The first criterion in categorizing studies on recreation behavior was considering the ontological commitments of the research. Ontology has been defined by Patterson and Williams (1998, 2005) as referring to the normative commitments regarding the nature of reality, the nature of the human experience, and human nature. In consideration of the different approaches to the study of recreation behavior a distinction could be made with regard to studies that used a rational, analytic, goal-driven, information processing model of human behavior or a model of human behavior in which individuals are actively engaged in the construction of meaning (Patterson & Williams, 1998). This conceptualization of the distinction of approaches based on differing models of human behavior is consistent with Omedei and Wearing's (1990) concept of process or goal-

Table 2.1 Overview of Approaches to the Study of Recreation

Approach applied to study of recreation	Brief definition of approach (theory or concepts applied)	Methodology	Chronology of a Recreation Activity*			Results and application of approach
			Prior to activity	Participation in activity (onsite)	After activity (recollection of activity)	
Motivational (e.g., Benefit-Based)	Approaches recreation through the study and measurement of motivations, primarily with quantitative, generalizable methods (expectancy-valence theory)	Recreation Experience Preference scales, Paragraphs about leisure, serious leisure inventory	Can be used to measure motivations prior to activity.	REP scales are most commonly administered directly following onsite activity to measure desire experiences.	Can be used to measure satisfaction of desired experiences.	Results generalizable to population of visitors to a given area. Useful to managers working with planning frameworks requiring measurement and monitoring of visitor experiences and in applicable management decisions.
Optimal Experience, Involvement, & Experience-based Models	Focuses entirely on the nature of experience (flow, peak experience, absorption)	Theoretical constructs such as flow, involvement operationalized/ experience sampling method	This approach focuses solely on the participation and involvement in the activity to inform understanding of recreation.			Provides managers with in depth understanding of the state-of-mind of some visitors. No direct management implications.
Meaning-Based & Emergent Experience (e.g., Hermeneutics)	Views the recreation experience as highly contextual and emergent. This would include studies in meaning-making and relationship to place.	Hermeneutics, other interpretive paradigms with qualitative interview texts and stories of recreation experiences	Some suggestion that visitors are motivated by the goal of enriching life, though no data collected at this point.	Focuses on participation in activity through onsite collection of stories from visitors.	Some attempts made to explain how data collected relates to greater state of personal well-being.	Provides information describing visitors' contextual understanding of recreation and environment specific to a given area. Provides managers with a better understanding of the specific experience and meaning of a visit to a given area.

*Chronology of recreation activities defined as: *Prior to activity:* prior to decision to participate in activity, does not include anticipation of activity, *Participation in activity:* time period from anticipation to completion of activity, and *After activity:* following completion of activity including recollection of the activity.

oriented theories of human behavior. The rational, analytic, goal-driven model of human behavior is consistent with telic or goal-driven theories; whereas, autotelic or process-oriented theories are consistent with models of human behavior where individuals are actively engaged in the construction of meaning. While the motivational approach adopts a goal-driven model of human behavior the meanings-based and optimal experience or multiphasic approaches adopt a process-oriented approach to the study of recreation behavior.

The motivational approach can be categorized by research that emphasizes recreation behavior as a means of satisfying underlying needs and goals (Patterson & Williams, 2005). The optimal experience or multiphasic approach distinguishes itself from the motivational approach by accounting for and investigating the emergent, multiphasic nature of the recreation experience. Supporters of this approach argue that the motivational approach does not account for this important aspect of the recreation experience (Stewart, 1998). Research that emphasizes the nature or meaning of experience as a basis for understanding recreation behavior can be categorized as a meanings-based approach. Patterson et al. (1998) defined recreation as an "emergent experience motivated by the goal of collecting stories that enrich individuals' lives" (p. 423). Obenour, Patterson, Pederson, & Pearson (2006) explain that the meanings-based approach presents a "model of human behavior that portrays individuals as actively engaged in the construction of meaning" (p. 34).

Indentifying and defining these approaches has the potential to improve our understanding of recreation research and behavior. The process of defining approaches and concepts helps to mitigate confusion and clarify debates within the field. However, this presents a difficult task. Inconsistency with regard to terminology complicates and furthers confusion. Also, whenever information is categorized it loses some of its original richness and detail.

2.2 Motivational Approach

Derived from the expectancy-valence theory, the motivational approach presents a model where an unmet need leads to a motivation to participate in a particular activity (Driver, Tinsley, & Manfredo, 1991; Manfredo et al., 1996). Maslow's (1943) theory of human motivation describes this need-motivation relationship in the context of human behavior. Within this model the motivation is followed by a behavior (e.g., a recreation activity), which is intended to satisfy the original need. If the activity satisfied the original need and met the motivation than the activity might be repeated if the need arises again; if the need was not met, then the activity would be modified perhaps with a different setting, companions, or activity. This evaluation performed by individuals regarding their recreation activities is illustrated by the feedback mechanism (Mannel & Kleiber, 1997) (Figure 1.1). Rather than viewing recreation as an individual outing, it explains recreation behavior as an ongoing process. The motivational approach presents a relationship between the motivation for the activity and the specific benefit of that activity. For example, the motivation of exercise or physical fitness is linked to improved

mental and physical health. The link between this specific benefit and an individual's general well-being is implied in this basic motivational model rather than explicitly illustrated.

Adopting a motivational approach Driver and his associates developed the Recreation Experience Preference (REP) scales (Driver & Brown, 1976). These quantitative scales measure a wide range of motivations for recreation, from spending time with family to achievement or stimulation. The scales, which have been widely used in the study of recreation behavior (Driver et al., 1991), were developed in the late 1960s and early 1970s. The reliability of these scales has been established in a meta-analysis conducted by Manfredo et al. (1996). The results, therefore, are generalizable given the limitations of the sample (i.e., a sample of visitors to a given area would represent visitation to that area and not beyond). However, even with the breadth of application of these scales and research regarding their reliability and validity, the expectancy-valence formulation, upon which they were based, never emerged as a source of empirical investigation in the study of recreation behavior (Manfredo et al., 1996). Therefore, while the measurement of the scales has been confirmed, research establishing the theoretical link between the expectancy-valence theory and recreation behavior is still needed.

Application of this motivational approach has led to the development of recreation planning frameworks within different federal agencies. First, the Experience Based Management (EBM) framework that led to the development of the recreation opportunity spectrum (ROS), which was adopted and applied by the US Forest Service

(Driver et al., 1987). The ROS linked setting and motivation by providing setting descriptions, coupled with experiences that each setting could provide. For example, a remote backcountry setting with little sign of human improvements or infrastructure would be considered to provide an opportunity for experiencing nature and solitude. More recently, the second framework, benefits-based management (BBM) has been adopted by the Bureau of Land Management (BLM, 2006). BBM presents four levels of recreation demand: activities, setting, desired experiences, and the benefit of recreation (Driver et al., 1991). BBM expands on EBM by accounting for a wide range of the outcomes of recreation (Moore & Driver, 2005). For example, benefits to the individual, off-site benefits to the community, and *disbenefits* or negative outcomes related to recreation. Similar to EBM and the ROS, BBM links an activity and setting to a particular desired experience.

There are numerous advantages to identifying the inputs and outputs of the recreation experience. By accounting for peoples' motivations for visiting an area and the specific activity and setting required to achieve that desired experience, managers are able to provide a higher quality recreation experience and reduce, mitigate, or prevent conflict. Furthermore, managers are better able to explain the outputs of recreation in terms of the benefits it produces at the individual and community level (Driver, 2008).

Researchers have also investigated people's personality and past experience with regard to their motives for recreation. As early as the 1970s, researchers were investigating the relationship between personality traits and motivations (Driver & Knopf, 1977). Barnett (2006) later confirmed this relationship in a study that found that

"individuals who typically turned to their environment rather than inward to their own imagination to entertain themselves were more likely to engage in outdoor activities" (p. 464). In addition to the influence of personality, the application of the concept of experience use history to the motivational approach has shown that people's previous experience with an activity and setting leads to different motivations (Petrick, Backman, Bixler, & Norman, 2001).

2.3 Optimal Experience or Multiphasic Approach

The optimal experience or multiphasic approach diverges from the motivational approach on two principles: accounting for the emergent, multiphasic nature of recreation and focusing on the state-of-mind involved in the experience itself. Csikszentmihalyi's (1982) concept of flow (i.e., a loss of self-consciousness accompanied by "a merging of action and awareness; a concentration that temporarily excludes irrelevant thoughts, feelings from consciousness" (p. 22)) is representative of the optimal experience concept and is closely tied to the investigation of the emergent nature of the recreation experience (Patterson & Williams, 2005). Many studies within this approach address the perceived shortcomings of the traditional motivational approach, particularly with regard to expectations and accounting for the multiple phases of recreation.

A common criticism of the motivational approach is that it does not account for the multiphasic nature of recreation (Stewart, 1998). The multiple phases of outdoor recreation were defined by Clawson and Knetsch (1966) and supported by Hammit (1980). The multiple phases consist of five unique periods of time: anticipation, travel to,

on-site experience, travel from, and recollection. In defining recreation Moore and Driver (2005) summarize these five phases and state their motivational model of outdoor recreation "does not explicitly address the important issue of timing" (p. 17). To account for this, researchers have applied the experience sampling method (ESM), a multiphasic approach, where study participants carry beepers with them and complete questionnaires at random times during their trip (Borrie & Roggenbuck, 2001; Hull, Stewart, & Young, 1992; McIntyre & Roggenbuck, 1998).

This multiphasic approach also accounts for the perceived lack of or weak expectations that people form with regard to recreation experiences (Arnold & Price, 1993). Individuals might be less certain of the outcomes of an activity with regard to certain activities or setting characteristics in which they have less experience. For example, if it is the first time someone is traveling with a group of companions, or if it is their first time participating in an activity or visiting a particular area they will most likely have weak expectations with regard to anyone of these trip characteristics. However, expectations in the form of motivations (e.g., spend time with friends, do something new and different, etc.) could still be present. Although present, with little past experience the realization of benefits from those activities could be far less likely. It appears that accounting for individual experience use history (EUH) might explain much of this variance (Schreyer, Lime, & Williams, 1984).

2.4 Meanings-Based Approach

The meanings-based approach adopts a process-oriented ontology for investigating the recreation experience. The paradigm hermeneutics has been used by researchers to study the recreation experience (Brooks, Wallace, & Williams, 2006; Patterson et al., 1998; Riese & Vorkinn, 2002). The focus of hermeneutics is on interpreting the meaning of recreation experience and understanding the emergent narrative of experience (Patterson et al., 1998). Patton (2002) explains that "Hermeneutics provides a theoretical framework for interpretive understanding, or meaning, with special attention to context and original purpose" (p. 114). Patterson, Williams, and Scherl (1993) describe four steps in hermeneutic analysis: establish a point of view from which to begin the analysis, read the interview transcripts several times to gain an understanding, use this understanding as the basis for a deeper exploration, and finally modify the understanding of the whole from the deeper exploration.

Due to small sample sizes, a strong focus on the context of specific places, and the ultimate goal of understanding instead of prediction, these hermeneutic studies and their results are not considered to be generalizable in the traditional sense of the concept (Patterson et al., 1998; Riese & Vorkinn, 2002). In considering this issue in qualitative research Auerbach and Silverstein (2003) suggest the concept of *transferability* as an alternative to generalizability where the themes and theoretical concepts generated from analysis of the data are transferable beyond the immediate sample. However, this concept of transferability is placed in the context of a grounded theory analysis which adopts a more positivist approach grounded in a world view of rationalism. Hermeneutic

studies can be evaluated on the extent to which they are persuasive, insightful, relevant to future research, and contain practical implications for management (Patterson & Williams, 1998, 2005). The issue of generalizability will continue to be an issue in the meanings-based approach because of the difficulty in applying it to a planning framework or making management decisions supported by research that applies a hermeneutic paradigm.

2.5 Limitations and Integration of Approaches

Patterson and Williams (1998, 2005) address epistemological issues in the field of social science applied to natural resource management. The authors discuss the concept of pluralism: "the idea that different scientific paradigms can and should coexist within a field or discipline" (p. 283). The motivational and meaning-based approaches adopt substantially different paradigms and ontological commitments in the study of recreation behavior. In contrasting the meanings-based approach and the motivational approach Patterson et al. (1993) state:

> Rather than beginning with a view of recreationalists as information processors seeking a package of benefits obtained through participation in a specific activity with a definite beginning and end, recreationalists are viewed as participating in the on-going enterprise of constructing a life and identity (p. 240).

Patterson et al. (1998) present four limitations to the application of the expectancy-valence theory to outdoor recreation. One limitation argues that people often have vague or nonexistent expectations (Arnold & Price, 1993). The concept that

people's recreation activities are driven by need-based motivations is central to the motivational approach. This criticism led to the development of the first hypothesis.

1. Individuals do form motivations a priori to the recreation experience.

Due to the nature of the criticism regarding the importance of motivation in understanding recreation behavior, consistency between people's motivations and benefits for a particular recreation outing will be investigated in this analysis. For example, if an individual's motivations for running were for exercise and to be outdoors are their benefits from running consistent with those motivations (i.e., improved physical fitness and enjoyment from being outdoors)? Empirical evidence of a relationship between motivations and benefits would provide support for hypotheses 1.

Another limitation addresses the emergent quality of the recreation experience and that this quality is often the most enjoyable aspect of the experience. This concept is described in hypothesis two.

2. However, the actual experience, and realization of these benefits do possess emergent and contextual qualities.

The third hypothesis explains a phenomenon whereby psychological outcomes or benefits of the recreation experience are not met, yet individuals are still satisfied with the activity. While the motivational model is often viewed as linear, the feedback mechanism creates a loop that explains how people process information based on the realization of benefits from past experience with the activity and subsequently modify their behavior in the future. The feedback mechanism explains how this anomaly fits in the expectancy-valence framework. If motivation is not met, the feedback loop would

explain how someone would modify that activity and setting in the future. This observed thought process is reflected in hypothesis three.

3. The failure to meet psychological outcomes, yet being satisfied with the recreation engagement, is explained by the feedback mechanism of the expectancy-valence theory.

The fourth hypothesis addresses the limitation presented by Patterson et al. (1998) regarding vague or nonexistent expectations especially for first time user by accounting for peoples' past experience with the activity and setting. The hypothesis predicts a positive relationship between an individual's past experience with an activity and their ability to consistently predict satisfaction with that activity. This concept is described in hypothesis four.

4. Previous experience with the activity or setting will lead to greater certainty about outcomes and increase expectancy-outcome consistency.

Finally, another limitation explains how the motivational approach does not explore what fulfilling a generally stated motivation means to people (e.g., "enjoying nature"). While the motivational approach does allow for the measurement of generalizable motivations of visitors to an area, this approach does not directly investigate what those motivated experiences mean to people. This is an important subject in recreation research, and the meanings-based approach is best suited to this exploration. In addition, the motivational approach hypothesizes benefits, and thus enrichment of one's life, follows from the fulfillment of motivations. In contrast, the meanings-based approach states that people seek to enrich their lives in a less structured

process with regards to recreation. However, if evidence of a relationship between individuals' recreation outings and well-being could be established within the context of the expectancy-valence framework, then a model for integration could be developed. Hypothesis 5 attempts to establish this relationship.

5. Individual recreation outings fit into a larger network of desired end states and the realization of goals from a specific recreation engagement are critical to the fulfillment of enriching one's life and well-being.

Providing evidence to support these hypotheses would demonstrate that people do operate in a goal-driven, rational manner in which they process information and behave accordingly. Explaining human behavior is complex and, although many of these hypotheses appear common sense, as a whole they create a narrative that describes in detail recreation behavior that is hypothesized to be generalizable. However, it would not disconfirm the meanings-based approach nor would it establish the motivation approach as the only valid approach to the study of recreation behavior. This research has the potential to further our understanding of the complex nature of the recreation experience and move the field towards a widely accepted method of measuring the recreation experience.

Chapter 3 Method

3.1 Study Concept

The expectancy-valence framework served as the conceptual model for this study (Figure 1.1) (Mannel & Kleiber, 1997). Therefore, an important requirement of the study was to measure people's motivations before the activity and their benefits after the activity. A longitudinal study was necessary to collect this information during the anticipation and recollection phase of the recreation experience (Clawson & Knetsch, 1966). In addition to the number of participants in the study, the number of complete activity narratives (i.e., activities that were discussed in both the pre and post-activity interviews) was also an important aspect of the sample. The complete narrative was necessary to examine the application of the expectancy-valence theory and the five hypotheses.

The concept of the study was also influenced by the criticism regarding the expectancy-valence framework. Considering this criticism regarding vague or non-existent expectations in recreation (Arnold & Price, 1993; Patterson et al., 1998), it would not be possible to use an established quantitative measurement instrument such as the REP scales (Driver & Brown, 1976) to measure motivation. Utilization of such an instrument would bias participants' responses by presenting them with a list of predetermined motivations for recreation. Rather it was required that in collecting data for the study the wording of questions or instructions as well as the terminology used (i.e., motivations, benefits, etc.) not lead or bias participants' responses. It was also

necessary to broaden the scope of the study from outdoor recreation to all leisure activities so that the results would not be limited to one category of leisure activities.

To determine an appropriate method to address the present research topic, the ontological commitments of the researcher was considered. Adopting a motivational approach that presents an information processing, goal-oriented model of human behavior it was important that the methods justified this approach (Patterson & Williams, 1998). Considering the research topic it was evident that qualitative methods would be necessary to adequately address the conceptualized study. Modified analytic induction was chosen as a positivist approach to studying qualitative data (Bogdan & Biklen, 1992). The methodology distinguishes itself from analytic induction in that the emphasis on universality and causality has been replaced with an emphasis on identifying patterns of behavior, interactions, and perceptions (Gilgun, 1995).

Modified analytic induction shares many of the same procedures as grounded theory (Glaser & Strauss, 1967). As a brief overview, grounded theory starts with a broad scope research concern, gathers data, and then utilizes team based coding to identify themes within the data. Team-based qualitative analysis diminishes inadvertent potential bias of the researcher by making sure that all coders are using a codebook in the same way and that the codes upon which themes are be built are well-defined, and used uniformly across the team. The end result of grounded theory is the generation of an explanation of behavior. Modified analytic induction differs in that it starts with descriptive hypotheses of behavior related to theory rather than a broad scope research concern. Modified analytic induction shares the steps of gathering data and team based

coding, however it includes a comparison of the themes that emerge to the original descriptive hypotheses to determine if they are plausible explanations of behavior or if modifications are needed. Significant departures from the original hypotheses can be considered disconfirmation of those hypotheses.

While a generalization at the theoretical level was intended (i.e., outcome-consistency regarding motivation and benefits), a representative sample of a larger population was unnecessary because no generalization was intended regarding a particular population (i.e., specific motivations or particular activities generalized to larger population). Auerbach and Silverstein (2003) propose the concept of *transferability* as an alternative to generalizability in qualitative methodology explaining that, "The more abstract level of theoretical concepts extends beyond the sample, whereas themes and repeating ideas are culturally specific" (p. 86). Therefore, in this study evidence of the theoretical constructs related to the research of recreation behavior (e.g. motivation, benefits, experience use history, etc.) would be *transferable* to a larger population. The themes and repeating ideas, such as specific motivations or recreation activities, could not be generalized beyond the sample. The transferability of the theoretical constructs and theory would fulfill the aim of this study to find empirical evidence of the expectancy-valence theory in recreation.

3.2 Pilot Studies

A series of pilot studies was conducted to determine an appropriate measurement instrument for data collection and to determine if the data collected would be sufficient to

address the hypotheses. Three pilot studies were conducted from November 2009 through April 2010. All pilot studies were determined exempt by the Institutional Review Board at the University of Alaska Fairbanks (Appendix A. Institutional Review Board Exemption Letter for Pilot Studies). The results were examined from each pilot study and the methods were refined accordingly (Appendix B. Summary of Pilot Studies). The product of this pilot testing was the final methodology.

3.3 Study Method

3.3.1 Study Design Overview

Two semi-structured interviews were conducted with each participant (Appendix C. Semi-Structured Pre-Activity Interview; Appendix D. Semi-Structured Post-Activity Interview). The interviews were conducted one week apart and investigated participants' thoughts regarding their recreation before and after their activities. The interviews were transcribed and modified analytic induction was used to analyze the data and address the hypotheses (Bogdan & Biklen, 1992). The final study method was determined exempt by the Institutional Review Board at the University of Alaska Fairbanks (Appendix E. Institutional Review Board Exemption Letter for Full Study).

3.3.2 Sampling

The intention of the sampling criteria was to capture different patterns of recreation behavior. The two criteria of gender and club affiliation produced the sampling matrix below (Figure 3.1).

	Member of a recreation club	Not a member of a recreation club
Male	4 participants	4 participants
Female	4 participants	4 participants

Figure 3.1 Sampling Matrix

From a total sample of 16 participants eight individuals were from local recreation clubs (e.g. running club, outdoor recreation club, cricket group, etc.) and eight individuals were not affiliated with any recreation club or association. Club membership was defined as:

> A member or affiliation with any recreation club within the past year. A recreation club would include outdoor recreation such as a paddling association or hiking club, indoor recreation such as knitting and bowling, and sports clubs such as cycling or ultimate Frisbee. This would not include one-time participation in a club activity, but three or more times in the past 6 months would be considered club involvement.

Although not a criteria for sampling, basic demographic information regarding participant's age, occupation, and nationality was also collected during the interview.

Interviews were scheduled with individuals over an eight week period between June 15th, 2011 and August 2nd, 2011 who responded to the flyers posted at the gym, student center, and library on the University of Alaska Fairbanks (UAF) campus as well as two coffee shops near the campus. Interviews were scheduled with individuals as they responded. The first four individuals from each of these groups to respond were selected for participation in the study. Once a cell within the sampling matrix (Figure 3.1) was completed individuals who responded were thanked for their interest in the study, explained that the study had already received enough participants, and their name and number recorded in the event that more sampling was required. With completion of the second interview participants were compensated $35 for their time. Two criteria were set for exclusion from the study: relatives or acquaintances of the researchers and individuals who had any prior knowledge of the research topic (e.g., participants in one of the pilot studies or individuals with knowledge of the research field gained from either coursework or employment).

Pre-activity and post-activity interviews were conducted for each participant in one of the public group study rooms at Rasmuson Library on the campus of the UAF. This location had several benefits. Rasmuson Library is the main library on campus; therefore, it was readily accessible to participants. It was also believed to be less intimidating for participants to meet at a public library than other interview locations

such as vacant classrooms or offices. Finally, the door with a window to the hallway could be closed to the group study room making it a confidential location to conduct an interview in which the participant would also feel secure.

3.3.3 Analysis

The data in the interview transcripts were examined multiple times in an iterative analytic process. Each time they were examined the focus of the research became more specific. This process began with the transcription of the interviews and was followed by the research team reading through the transcripts. The interviews were then examined again for the content of specific concepts by coding the text and creating memos. The kappa statistic, which tested for inter-coder reliability, was calculated for each code and guided the refinement of the codebook (Appendix F. Final Codebook). The data were examined a final time, and the hypotheses were addressed.

Interviews were transcribed verbatim; however, hesitations in speech (i.e. uh, um, etc.) were not transcribed unless critical to understanding the conversation. The entire recording from each interview was transcribed with the exception of the introduction. Introductions were omitted from the transcription for two reasons: the introduction was identical for each interview (Appendix C. Semi-Structured Pre-Activity Interview) and interviews often included dialogue that built rapport with the participant. This rapport was important to ensure the participant would feel comfortable discussing his or her recreation activities, but the dialogue was not relevant to the research topic (i.e., none of the discussion was related to participants' recreation).

To provide confidentiality to study participants a number was immediately assigned to each participant. This number identified the participant throughout the remainder of the study. The scheme utilized for assigning numbers to participants was as follows:

- 10-19 were assigned to male club members,
- 20-29 were assigned to male non-club members,
- 30-39 were assigned to female club members, and
- 40-49 were assigned to female non-club members.

Following the transcription of the interviews, a team-based approach was implemented by three researchers. While two researchers had prior knowledge of the field, the third researcher had no prior knowledge of the research topic or field. This researcher was also not a U.S. citizen and English was her second language. This provided the study with an outside observer who would be able to confirm coherence of the research findings (Auerbach & Silverstein, 2003). Prior to beginning the analysis this research team member was informed of the expectancy-valence theory and framework. Key terms used in the hypotheses were also defined. It was necessary to clarify these concepts and terms within the research team in order to avoid confusion in the data analysis process.

The second step in the analysis was for the research team to simply read all of the transcripts. Although this step might appear common sense, it was an important step for the research team to familiarize themselves with the data. The pre- and post-activity interview format provided a holistic view of participant's recreation behavior that was

important for the research team to understand.

Next, a codebook was collaboratively developed. The codes developed and included in the codebook were based on three criteria: constructs in the expectancy-valence framework (Mannel & Kleiber, 1997; Moore & Driver, 2005), concepts critical to testing one or more of the hypotheses, and concepts that were believed by the research team to be applicable to understanding recreation behavior. For example, to investigate the expectancy-valence framework in recreation behavior, it was necessary to apply codes for motivations, activities, settings, and benefits. The definition for the *motivation* code was any reason why someone might participate in a particular recreation activity and the definition of the *benefit* code was any benefit related to a recreation activity[2]. A code for *past experience* was required to test hypothesis four regarding the relationship between a participant's previous experience with the activity and expectancy-outcome consistency.

Analytic memos were also drafted at this time for each set of interviews. They contained some basic demographic information (e.g. gender, age, etc.), a general summary and overview of the interview, some ideas regarding the fit of the expectancy model to the participant's behavior and thoughts regarding their recreation activities, as well as any additional comments. While the process of coding focused on specific concepts and constructs the memos were useful in considering and discussing the nature of the participant's recreation activities in a holistic manner.

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[2] The final definition for the code removed the term benefit from the definition: any positive outcome related to a particular recreation activity or activities. This code is distinguished from *motivations* by occurring post-activity during the recollection phase of the experience.

The next step was to test for agreement among the research team regarding the conceptualization and assignment of the codes. This was performed when the research team believed that the codes included in the codebook were sufficiently defined and comprehensive with regard to representing the expectancy-valence framework and the concept of the emerging qualities of the recreation experience described in hypothesis two. This agreement would allow testing of the motivational model and hypotheses, and could be considered analogous to showing reliability in a quantitative study.

To test this agreement a set of interview transcripts from a participant were selected that were considered by the research team to contain a wide range of the concepts and the participant was able to discuss in depth his/her thoughts regarding their recreation activities. The transcripts were then independently coded by the research team and the kappa statistic was calculated (Cohen, 1960). The kappa statistic corrects for the possibility that researchers might agree on assigning codes by chance and provided an objective evaluation of how uniformly the research team conceptualized the codes. It also provided a starting point for discussion by targeting activity narratives about which the team disagreed. A kappa statistic was not calculated for codes that were applied to text segments less than an average of three times. The calculation was not performed because with such little application the kappa statistic would not have provided meaningful results.

Results for the kappa statistic range from negative one to positive one. What represents an acceptable kappa statistic continues to be a source of debate in the literature (Mohatt et al., 2004). Landis and Koch (1977) recommend the following guidelines for

interpreting the kappa statistic: less than 0.0 is poor agreement, 0.01 to 0.20 is slight, 0.21 to 0.40 is fair, 0.41 to 0.60 is moderate, 0.61 to 0.80 is substantial, and 0.81 to 1.00 is almost perfect agreement. Although some researchers have recommended stricter guidelines with regard to the kappa statistic (i.e., Carey, Morgan, & Oxtoby (1996) judged a kappa statistic less than 0.90 to indicate a problem in the use of the code). It was determined prior to examining the data that if codes received a kappa statistic of less than 0.61 the code would be considered problematic and refinement of the code would be necessary. For this study, the following guidelines were determined:

0.81 to 1.00 is excellent,

0.61 to 0.80 is acceptable,

0.41 to 0.60 is problematic, and

less than 0.41 is poor or unacceptable.

To calculate the kappa statistic with three researchers Fleiss' (1971) generalization of Cohen's kappa coefficient (1960) for multiple coders (Figure 3.2) was utilized:

$$P_i = \frac{1}{n(n-1)} \sum_{i=1}^{k} n_{ij}(n_{ij} - 1)$$

	# of researchers that applied code	# of researchers that did not apply code
Text segment one		
Text segment two		
Text segment three, etc.		

Figure 3.2 Calculating the Kappa Statistic with Three Researchers

Researchers were permitted to apply whatever code they felt appropriate to any phrase, sentence, or paragraph of the transcripts. Therefore, some text segments that were coded overlapped with what other researchers had coded or no code was applied to that particular text segment. For the purpose of calculating a kappa statistic all the text that was coded by any of the coders was considered a separate text segment with the exception of significantly longer responses that contained numerous codes and/or themes within. These text segments were divided into two or more text segments depending on the number of codes utilized within the response.

Two of the researchers performed the final coding. The transcripts were evenly distributed by the participants' number. The participants had been assigned numbers in the sampling process based only on the sampling matrix. Odd numbered participants were assigned to one researcher and even numbered participants were assigned to the other researcher. Therefore, for the final coding the participants were evenly divided based on gender and club affiliation between the two researchers. To establish inter-coder reliability for the final coding, approximately 10% of the transcripts coded by the second researcher were randomly selected and coded by the other researcher performing the final coding.

The Microsoft Excel (2003) random number function was utilized to produce a random sample for the final inter-coder reliability test. First, three participants' numbers were selected. Participants that had already been utilized in a previous kappa calculation were removed from consideration for the final kappa calculation. To select a section

from each of these participants' interviews the Microsoft Excel (2003) random number function was again utilized to select a random page number. To evaluate inter-coder reliability for the required 10%, the 15 pages following the randomly selected page number were coded for the final intercoder reliability or kappa calculation (i.e., 10% of 450 pages in half the interview transcripts = 45 pages divided by three participants selected = 15 pages).

Formula for calculating kappa statistic with two coders (Figure 3.3) (Cohen, 1960):

$$K = \frac{Pr(a) - Pr(e)}{1 - Pr(e)}$$

Where Pr(a) is the relative observed agreement among raters, and Pr(e) is the hypothetical probability of chance agreement.

		Researcher A	
		Applied code to text segment	Did not apply code to text segment
Researcher B	Applied code to text segment	Both researchers agree in applying code	Researcher B applies code Researcher A does not
	Did not apply code to text segment	Researcher A applies code Researcher B does not	Both researchers agree By not applying code

Figure 3.3 Calculating the Kappa Statistic with Two Researchers

An important step in the data analysis was to determine the different recreation activities of the participants. An attempt was made in each interview to discuss three to

five activities. While the semi-structured interview format did provide at least several activities that were discussed in-depth, defining these activities was important because the narratives of these activities would become the units of analysis for the study. This ensured that the research team would be examining identical activity or units of analysis. The participants' discussion of the activity from the pre-activity interview and the post-activity interview were both considered in the analysis. The computer software program ATLAS.ti (Version 6.2) was utilized at this point to organize the data and define the recreation activities. A different code was assigned to each activity defined in the transcribed interviews (i.e., activity – biking, activity – soccer, activity – guitar, etc).

Throughout the analysis, the research team searched for disconfirmation of the hypotheses and deviation from the expectancy-valence framework. Researchers read through each activity narrative and selected quotes they believed did not represent the model or were contradictory to one of the hypotheses. This text was coded as *hot quotes*. These quotes would serve as a starting point for group or team discussion regarding the fit of the model and hypotheses.

Each recreation activity (i.e., unit of analysis) discussed by a participant, was considered by each research team member. This step of the analysis adopted a holistic examination of the narrative of the recreation activity with regard to its fit to the basic motivation model (Figure 1.1) with the exception of hypothesis two which accounts for the emergent nature of the recreation experience. The basic motivational model and the hypotheses in this study are descriptions of human behavior. These descriptions of human behavior are based on a review of literature and observations of recreation

behavior and were formulated to address specific criticisms of the expectancy-valence theory from the literature. Both researchers considered whether the participant's response fit the basic motivation model and met the criteria for each hypothesis.

The development of the five hypotheses was guided by the motivational approach and application of the expectancy-valence theory to the study of recreation behavior. The emergent nature of the recreation experience was also accounted for by hypothesis two. Examining or considering anyone of these hypotheses individually would not support the motivational approach to recreation. For example, considering the first hypothesis, we could establish that people form motivations a priori to their recreation activities based on the results from the coding and kappa calculation. However, that would not support the motivational approach or the expectancy-valence theory because it would not establish a relationship between motivation, activities or behavior, and the benefits driven by those motivations as proposed by this theory. The hypotheses rather are descriptions of human behavior that form a narrative of people's recreation behavior. Therefore, all five of the hypotheses were considered in examining each of the 48 narratives of participants' recreation activities (Appendix G. Activity Narrative Table).

Consistent with modified analytic induction, if a hypothesis is disconfirmed it is modified to fit the data. For disconfirmation and modification of a hypothesis to occur a repeating idea would need to emerge that was contradictory to one of the hypotheses or the expectancy-valence framework. A single case of evidence contrary to one of the hypotheses would be considered analogous to an outlier in quantitative research and not representative of a behavior or theme that could be generalized beyond that occurrence.

There are no established guidelines with regard to a quantification of the number of times an identifiable behavior need occur to be considered a theme. Auerbach and Silverstein (2003) define a repeating idea as the use of "the same or similar words or phrases to express the same idea" (p. 37). Given this definition and considering the need to acquire enough data to adequately modify the hypothesis in the event of disconfirmation it was determined that for this study a behavior would need to occur in at least 10% of the sample (i.e., activity narratives). Robinson (1951) summarizes two manners in which modifications are made to the hypotheses: 1) modifying the model/hypotheses theoretically to fit or encompass the observed phenomenon or 2) outlining the limitations of the model/hypotheses to exclude certain observed phenomenon.

Chapter 4 Results

4.1 Development of the Codebook and Tests of Inter-Coder Reliability

4.1.1 Interview and Sample Results

The overall response was sufficient to complete the proposed sampling matrix (Table 4.1). Consistent with criteria for exclusion, two individuals that were subsequently removed from the sample; one individual had participated in a pilot study and the other had completed a recreation planning class. This decision was made prior to completion of the sampling and therefore additional individuals were interviewed in their respective cells of the sampling matrix to complete the sampling process.

The average length of the pre-activity interview was 62 minutes and the average length of the post-activity interview was 38 minutes (Table 4.1). Ten of the 16 individuals in the sample were either part-time or full-time students at (UAF). Participants' age ranged from 21 to 61 years and three individuals from foreign nations participated in the study. Although people's age and nationality were not criterion in the sampling, the diversity in age and nationality provided diversity of perspectives regarding people's recreation behavior. Of the 16 participants interviewed each discussed two to four activities in both the pre and post activity interviews for a total of 48 narratives of individuals' recreation activities.

Table 4.1 Interview Results and Sample Demographics

participant #	Interview time (minutes) Pre-activity	Post-activity	gender	age	nationality	occupation
11	62	61	male	36	USA	part-time student/unemployed
12	135	94	male	43	USA	accountant
13	53	34	male	23	India	full-time student
15	42	21	male	25	USA	UAF staff
21	74	49	male	52	USA	part-time student/river guide
22	45	29	male	22	USA	full-time student
23	73	30	male	36	Japan	UAF staff
24	54	33	male	26	Cameroon & Nigeria	full-time student
31	44	38	female	26	USA	part-time student/occupation unknown
32	37	27	female	22	USA	part-time student/occupation unknown
33	59	30	female	21	USA	full-time student
34	61	28	female	42	USA	engineer
41	70	40	female	31	USA	UAF staff
42	70	26	female	26	USA	part-time student/part-time ESL teacher
43	44	25	female	23	USA	full-time student
44	66	48	female	61	USA	retired

4.1.2 Coding, Development of the Codebook, and Kappa Statistic

The second test of the kappa statistic was conducted on text from participant #23 as that transcript was believed to represent concepts that were the focus of revisions following the initial kappa. Results from the second kappa ranged from .61 to .86, and showed that, with a few revisions, the analysts were ready to proceed with the final

coding of the data. The codebook was completed over the course of four team meetings during a one-month period. The final code book consisted of 15 codes (Appendix F. Final Codebook).

A kappa statistic was not calculated due to infrequent use with codes such as *setting: deterrent* and *expected* (Table 4.2). Due to the infrequent application of these codes their exclusion from the codebook was considered. However, it was determined that they were an important aim of the study and that their infrequent application was due to the limited size of the text that was coded for the purpose of calculating the initial and secondary kappa statistics. This determination was confirmed in the final coding and kappa statistic calculation where all of the codes were at an adequate level.

For the final kappa 15 page excerpts were randomly selected from participants #13, #31, and #33. The results from this final kappa calculation are represented in the far right column below (Table 4.2). The average kappa moved from the problematic range (0.41 to 0.60) in the initial coding to the acceptable range (0.60 to 0.80) in the final coding. This objective evaluation provided confirmation that the iterative process had produced a codebook with greater reliability.

Table 4.2 Kappa Statistic Results

Code	Initial kappa	Second kappa	Final kappa
Motivation	0.38	0.77	0.80
Larger goals	0.43	0.86	0.69
Benefit	0.40	0.62	0.76
Disbenefit[1]	NA	NA	0.13
Impact benefit[2]	NA	NA	1.00
Identity[1]	0.47	NA	0.85
Past experience	0.71	0.65	0.72
Facilitator[1]	0.64	NA	0.61
Deterrent	0.54	0.61	0.51
Setting: deterrent[1]	NA	NA	0.55
Setting: facilitator[1]	0.44	NA	0.61
Expected[1]	NA	NA	0.83
Unexpected	0.61	0.67	0.91
Overall kappa average	0.52	0.67	0.69

[1]The kappa statistic was not calculated for codes that were applied on average by the coders less than three times.
[2]The *impact benefit* code was developed following the first two calculations of the kappa statistic.

All of the disagreements between the two coders with regard to the use of the code *larger goals* occurred when one applied *larger goals* and the other applied *motivations*. While the result of the kappa calculation for this code is within the acceptable range set for this study the results would have been a perfect 1.00 if this specific disagreement was reconciled. The nature of this disagreement shows evidence of a relationship between *motivations* and *larger goals*

The final intercoder reliability test for *deterrent* and *setting: deterrent* resulted in kappa statistics (Table 4.2) that were within the problematic range (0.40 to (0.61) for this study. The disagreement with regard to these codes could be attributed to the more

frequent use of *deterrent* by one researcher and difficulty distinguishing between the two codes by two researchers. If these text segments were reconciled by removing occurrences where one coder applied *deterrent* and the other applied no code the kappa statistic would be 0.73, within the acceptable standard set for this study. The disagreement with regard to *setting: deterrent* was primarily due to one researcher applying *deterrent* to text segments that the other had codes as *setting: deterrent*. If these text segments were reconciled by removing occurrences where *deterrent* was used the kappa statistic for *setting: deterrent* would be 0.81, also within the acceptable standard set for this study.

The result of the kappa statistic (kappa = 0.13) for *disbenefit* was the lowest for any code (Table 4.2) and falls within the poor or unacceptable range for the study guidelines. By examining the application of this code by the two coders it is evident that they were conceptualizing the code differently. The definition of the code in the code book states: any negative outcome related to a particular recreation activity or activities. One researcher reserved use of the code for instances where the participant expressed a negative outcome of their recreation activity. For example:

> "Well I've been writing a lot for this upcoming season during the summer just I found that a lot of times because this kind of my baby that I will often put off school work to work on this and that's not always the smartest thing to do" (#11 pre-activity interview).

The other researcher coded these instances as *disbenefits* as well. However, they also coded instances that could have been considered a negative consequence though the participant did not express any judgment or negative opinion of the outcome. In addition, what was being expressed could actually have been the enjoyable aspect of the activity. For example, in the quote below coded as a *disbenefit* by that researcher, the "scary speeds" could actually have been the desired outcome and/or positive aspect of the experience.

> "And, and not only were they big, one of them actually had been a sled dog before, so she knew whenever there was any sort of tension on the line, that there's you know a resistance on my end, get lower and run harder. That, those 2 would just, scary, scary speeds on that bike" (#11 post-activity interview).

The concept and study of disbenefits is critical to understanding recreation behavior and, therefore, could not be simply eliminated from the study. All of the quotes coded *disbenefit* were considered by the third coder that was involved in every aspect of the analysis with the exception of the final coding. This coder agreed with the use of the code where the participant expressed their recreation activity caused a negative outcome to other aspects of their life. *Disbenefit* codes associated with text in which the respondent did not expressly report a negative outcome were removed. With their removal the kappa statistic for *disbenefit* was 1.00. The definition of the code was edited in the codebook to reflect this clarification to: A negative psychological or physical

outcome of an activity that has had an impact on the participant's life. This impact has been interpreted or judged to be negative by the participant. For example, any mention of isolation, addiction, impact on friendship/relationships, general health, school, or work.

4.2 Outcome-Consistency Results

Central to the expectancy-valence framework and the motivational approach is the concept that people's motivations for recreation activities guide their behavior and the benefits of that behavior are consistent with their motivations. This outcome-consistency concept distinguishes the motivational approach from others that argue expectations related to recreation are vague and often not existent (Arnold & Price, 1993; Patterson et al., 1998). Furthermore, the linear model has been criticized because of its reductionist characteristics and simple input-output framework. However, information collected in this study provides empirical evidence of outcome-consistency. Five examples are provided below.

4.2.1 Similar Themes across Participants – "Recreation Benefits My Work"

In analyzing the data, a theme emerged in which recreation was used either to increase work performance or to refresh oneself after work. This theme was evident in approximately 12.5%[3] of narratives, and supported the constructs of motivations and benefits as well as outcome consistency.

[3] Six out of 48 narratives exhibited this theme.

More specifically, participants stated in the pre-activity interview that one of the reasons they participated in the activity was because they used it to achieve a certain psychological outcome related to working. For example, interviewees said biking to work in the morning so that "I'm ready to dive into work" (#23 pre-activity) and "waking up after work" (#33 pre-activity) by riding her mountain bike (Appendix G. Activity Narrative Table) (Table 4.3). The first individual rides his bike to work to be more prepared to focus once he arrives in the morning while the other rides her bike in the evening following work as stimulation following a day working in an office. Another participant explained how his recreation was as a reward for working (#24 pre-activity). All three recreation activities have specific psychological outcomes expressed by the individual related to their work. While this theme provides clearly expressed motivations it is also evidence of participants moving from an undesirable state to a desirable one through their recreation activities. This also provided more support for the expectancy-valence theory in the certainty of outcomes reinforced through another behavior. The three other instances were equally as strong as these three examples. This theme provides evidence of a relationship between motivations and the psychological outcome or the benefit of the activity.

Table 4.3 Work Related Motivations

Activity & Participant Number	Work Related Motivation Quote
Biking #23	Recreation, for exercise, for me to feel better. You know. I like to sweat and then just it's great in the morning to wake up after a cup of coffee take off, and you sweat a little bit, so by the time you get to work I'm sweating and I feel more awake and I'm ready to dive into work rather than trying to look for some more coffee and surf on the web for a while. (pre-activity)
Movies #24	And I sometimes it's like a reward after working for so long. You reward yourself time and again by doing those things you really like. (pre-activity)
Biking #33	it's a good way to wake up after work. You know, even though (place of work omitted for confidentiality) is a fun job, I like it, but, ugh, these days in the office are killing me. So after work it's nice to get some adrenaline in your system. It's definitely a rush for me, cause it's still new and exciting, and scary. So, for the rush to kind of wake you up. It gets you ready for the evening, I guess. Yeah, socially, it's great exercise again, but it's just a lot of fun, it's just for the rush. (pre-activity)

4.2.2 Converging Patterns of Unique/Similar Motivations across Individuals

The aim in the sampling process was to collect narratives of several activities from each participant. The intent of collecting multiple activity narratives from individuals was both practical (i.e., participants were already present and were to be compensated for their time) and because it could provide a greater diversity of activities (e.g., different past experience, different motivations, etc.). In all of the activity narratives it was found that participants had both similar motives for different activities as well as unique motivations for particular activities.

The extent to which these motives were similar among the recreation activities of an individual varied from only a single motive (e.g., #12 preparation for triathlons and

races was a motive for both training and cooking) to as many as three similar motives (e.g., #23 had similar motives of exercise, being active, and being outdoors for multiple activities (Figure 4.1)). Despite the prevalence of these similar motives among different recreation activities, motives unique to specific activities also existed for every activity narrative (e.g., #11 reported being active and getting a workout as a motivation for riding his mountain bike though made no mention of these motivations with regard to his other activities: writing for a radio show and playing his guitar). The presence of motives unique to an activity provides evidence of people selecting activities that meet their particular needs. If need-driven motivations did not inform our recreation behavior, then, the unique motivations with regard to particular activities would not exist at this level.

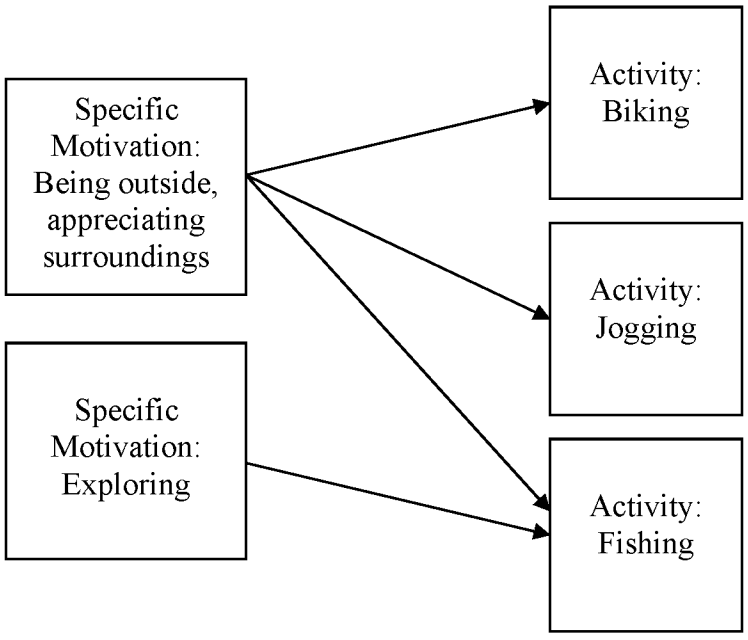

Figure 4.1 Unique Motivation to Activity Example[4]

[4] Example from pre-activity interview with participant #23.

4.2.3 Flexible Recreation Activities with Enduring Motivations

Recreation activities appear to be part a life-long process and ongoing endeavors that are driven by motivations. While people might frequently undertake new activities their motivations remain somewhat more static. Two themes in the data support this concept: the multiple activities that were part of a larger goal or personal project (Omodei & Wearing, 1990) and the activities that participants would replace or substitute their current activity with if they could no longer partake.

Through the refinement of the codebook, the larger goals or projects construct was defined as: "major motivations or projects that play into one or more activity and/or are not achieved immediately, but rather over a long period of time. A *larger goal* could include one or more specific motivations and/or activities" (Appendix F. Final Codebook). *Larger goals* were found with every participant in the study. As part of an effort to measure larger goals or projects, participants were asked if there were other activities that they did as part of that larger goal (Table 4.4). The activities they provided were consistent with the motivations and larger goal they reported.

Table 4.4 Larger Goals Linked to Multiple Activities

Activity & Participant Number	Quote Explaining Larger Goal	Activities Included in Larger Goal
Dancing #33	I like dancing as a skill, I want to keep dancing as one of my skills, because it's, beside, like I said, being social, you could relate to anyone of all walks of life or ages. It's also global. So I'm learning these certain steps in Alaska, but if I go to Spain next year, which I will, I'll be dancing the exact same steps with a whole new partner. So with these skills, I can take it all over the world, and, and I guess fit in, or find a group wherever I go. Cause there's dancers everywhere. (pre-activity)	Yeah, definitely, I guess that's why, like I chose guitar over any other instrument, because it's probably the most common. So, hm people with get, have guitars all over the world, so I don't have to bring my guitar wherever I go, I can just go to someone's house and they probably have a guitar that I can play. (pre-activity)
Biking #34	Well, it certainly fits with the personal goal of just general fitness. Larger projects. I don't know I'm not really into the environmental movement, but I kind of grin when I see a Prius driving by and think I'm getting better mileage than you are (laughing). I don't know just it's a way to exercise and actually your kind more a part of the community. (pre-activity)	Well the running yeah. I mean I'm gonna try to do that marathon. It certainly contributes to fitness and then some, but the other things that I talked reading and cooking don't really contribute to that. (pre-activity)
Writing for radio #11	Well, I mean as with any creative endeavor you have to keep writing to stay sharp at it. Ya know it's just like playing music. I mean if you set your guitar down for 6 months and then pick it up you still kind of know where the fingers go, but you're going to be ya know you're going to be - it's going to be ugly for a while until you really get back into it and ya know it's just something that keeps the thought process in that mode and you're not getting distracted by other things. (pre-activity)	Well, I mean certainly playing music also is something very similar to that ya know that you've got to have kind of an idea… (pre-activity)

As previously explained questions were developed throughout the pilot studies that would adequately measure peoples' motivation related to their recreation activities. In addition to inquiring about the "reasons" they had for participating in an activity another question was developed that attempted to further investigate the needs-based aspect of the motivational construct. Two hypothetical questions were presented: "What would be the impact if you couldn't participate in this activity? How would your life be different?" In half the activity narratives participants responded that if they could no longer partake in a particular activity they would replace or substitute the activity with another recreation activity. All but two of these narratives included specific benefits that participants would seek in the activity they would use as a substitute. These benefits are consistent with the benefit reported for their current activity. Four examples of this phenomenon are shown below (Table 4.5). Individuals were not prompted with regard to substituting their current recreation activity. Of the half that did not present activities to replace their current activity all but three stated that it would impact their life in some manner and many expressed particular needs that would not be fulfilled. In the three cases that participants responded that the loss of the activity would not impact them they responded that the loss of other activities would have great impact on them. By examining the activities that participants selected to replace their current activity it appears that they fit their existing motivations and larger goals.

Table 4.5 Participant Responses to Impact Regarding Loss of Activity

Activity & Participant Number	Response to impact question
Writing a book #21	It wouldn't be as good a life if I didn't have this project. How would I be impacted? Hum, (pause) I would generally channel my energy somewhere else. Which a lotta times I think I should. There's a million book writers. But if I build Birch Bark canoes, I'd be the only guy doing it and I could achieve something. (pre-activity)
Soccer #24	Yeah, so without soccer I think I amenable, I'm flexible ya know of going to some other sport that, maybe lifting weights or doing some other thing that will give that same, even if not the same, but some form of a relaxing activity. (pre-activity)
Dancing #33	If I wasn't dancing I'd be focusing a lot more on the, on the biking, climbing. So my life would be different cause I wouldn't have, I wouldn't, I wouldn't have nearly that amount of friends and range of acquaintances. I think my, my circle of acquaintances would be narrowed to people my age. If I wasn't dancing. But I'd be I'd just be doing a lot more outdoor stuff, which is great, I love to do that, but it would be a lot different. I'm really happy to have the variety I have in dance. (pre-activity)
Biking to work #34	Doesn't have to be on wheels even, doesn't have to be fast just a way to get exercise and be outdoors and do something where they're other people around. You know that sense of community again. (pre-activity)

Support of this concept was also found in the final coding and kappa calculation. The only disagreement between the *motivation* and *larger goals* codes was when coders applied these codes differently to the same text segments. This provides evidence that recreation activities appear to be part a life-long process and ongoing endeavors that are motivation driven. Furthermore, it appears that the activity itself is not as important as the need-driven motivation and the fulfillment of that motivation, as many activities can be substituted to meet a motivation. While people might frequently undertake new

activities their motivations remain somewhat more static. The nature or specific characteristics of the recreation activity appears to be a result of the setting, and activity limitations and convenience factors as well as the classic constraints of time and money (Table 4.6). This phenomenon is evident by the frequent use of the facilitator, deterrent, and setting codes.

Table 4.6 Facilitator, Deterrent, and Setting

Activity & Participant Number	Code	Quote
Cricket #13	Setting: deterrent	So if it's raining then the ball will not bounce back and it will be very difficult for the bowler as well as the batsman. (pre-activity)
Fishing #23	Deterrent	It is a big issue because, you know, gas is expensive. Dipnetting trip is, I don't how much, 80 bucks or whatever I paid for gas last time. (post-activity)
Chickens* #31	Deterrent & Facilitator	I got 2 weeks and then I butcher half of them. And the other set gets to go on for another 2-3. That's expensive, that's really expensive. And I've heard that rabbits are cheaper. So, if not chickens, maybe rabbits. (post-activity)

Note: *The second sentence in this example with regard to the expense of chickens was coded as a *deterrent*, the final two sentences were coded as a *facilitator*.

4.2.4 Pre-Activity Motivations Expressed as Benefits

The motivation and benefit codes or constructs were empirically closer than hypothesized. This became evident while conducting the interviews and during the development of the codebook after the results of the first kappa statistic calculation. It was believed that the pre-activity interview would capture motivations while the post-activity interview would capture benefits. In addition to the pre and post-activity

interview format the questions in the semi-structured interviews were also specifically worded in order to capture the desired constructs. For example the pre-activity interview asked "Specifically with regard to *this weekend or next week*, what are some of the reasons you are going to participate in this activity?" and the post activity interview asked, "Was the activity enjoyable? What made the activity enjoyable or not enjoyable?" One individual responded to the question in the post-activity interview by stating that she already answered that question in the pre-activity interview. Therefore, it appears that individual did not consider the two questions conceptually different.

The results of the initial kappa statistic revealed that the research team had difficulty distinguishing between motivations and benefits. This confusion was clarified and subsequent kappa results reflected this clarification. The confusion, however, revealed a link between the two constructs. Individuals often expressed their reason for participating in an activity as a benefit; i.e., an unequivocal statement of the outcomes that would be realized after completion of the activity (Table 4.7). Thus they were identified by the researchers as benefits.

The difficulty the research team had in determining the difference between motivation and benefits during anticipation and recollection phase is not only evidence of expectancy-outcome consistency, but also evidence of a relationship between motivations and benefits. This also provides evidence of intentionally creating, or confirming, an identity prior to participation in that activity.

Table 4.7 Pre-Activity Motivations Expressed as Benefits

Activity & Participant Number	Expressed Pre-Activity Motivation
Running #32	It helps me wind down. Cause I can get really hyper and so like it helps me just wind down and calm down and I feel better, and just sort of like for peace of mind and I like doing it. I like running on the same path everyday trying to figure out if I'm going faster or if I'm not going faster or like that kind of thing so… (pre-activity)
Playing guitar #34	It's mostly for therapeutic purposes, or for uh, it kinda brings to me the sense of fulfillment in myself I guess (pre-activity)
Cooking with grandkids #44	For them to learn to enjoy it, for one thing. And because I really believe that if you're a family member, or even if you're just visiting somebody, that you should participate in what needs to be done. Yeah, that it can be fun. If you know how to do it and you're not, I think that when a kid learns how to do things young, they have more confidence and they're not so afraid to ask questions. But when you've never learnt anything, you think you're, you feel stupid about yourself. And you're afraid to ask questions cause you think you look stupid, or you should already know it, whereas if you're learning all the time, you're not so afraid to ask questions and to learn more. (pre-activity)

4.2.5 High Level of Consistency between Pre-Activity Motivations and Post-Activity Benefits

An activity narrative table (Appendix G. Activity Narrative Table) was created to examine the application of the expectancy-valence theory to the information collected in the study. A summary by the researcher who performed the final coding of the text that was coded as either motivations or benefits for the particular activity is included in this table. These codes received high kappa statistic establishing their reliability[5]. Due to the

[5] Final kappa statistic for *motivation* = 0.80 and *benefit* = 0.76.

subjective nature of qualitative data no formal quantitative test was performed with regard to the consistency between motivations and benefits. However, by examining the two it appears that the motivations and benefits are consistent. For example, participant #32 reported prior to the activity that her motivations for mushroom picking were excitement and contributing to her food supply. These motivations are consistent with the benefits of excitement related to gathering and successfully harvesting a lot of mushrooms reported after the activity. While she did not report going with a different person as a benefit she was able to go mushroom picking with a new person.

There was evidence of both autotelic and telic theories within individuals (Table 4.8). Several individuals expressed that their reason for participating in their recreation activity or activities was both for specific goal-oriented reasons or motivations and for the general involvement in the activity. It appears that by examining this data both a meanings-based and a motivational approach is capable of explaining the observed behavior.

Table 4.8 Goal and Process Oriented Theory within Individuals

Activity & Participant Number	Process-Oriented (Autotelic)	Goal-Oriented (Telic)
Exercise (Biking & Jogging) #23	Exercise also involves appreciating the moment, the sunrise, the wind, going through the trees and leaves making noise and exercise here means a lot more than just getting some sweat down. (pre-activity)	Yeah. So biking would be a little bit more social, or fishing, hunting, they would be more social. Jogging would be, for some reason, very solo experience. Even when I was growing, when I was in Japan doing it, it always just myself and nothing else. No friends, no family members. Nothing really mattered. (pre-activity)
Traveling & Writing #11	It's not like I have to achieve something with it. I just do it. It's not like I - there's not an end result, that's the thing. (traveling, pre-activity)	That's what I like, when I see it done. It's really hard, but every writer says the same thing, that they have a, they don't like writing but they like having written. And then it's like done and it's like, wow, that's pretty cool. (writing, post-activity)
Biking #34	Ok, so instead of taking the car I would ride because it's fun, it just puts a smile on my face. I enjoy being able to - I obey traffic laws, but I enjoy zipping in and out and not having to deal with parking lots and waiting for the guy in front of me to wait for the pedestrian walking across at Fred Meyer. I can just dart in and out. So I enjoy that. (pre-activity) I like to ride especially in the morning on the way to work right after it has rained it just smells really good and the birds are singing so all those things are sort of a community feel, sense, sense of belonging I guess. (pre-activity)	I just, I always need to exercise. It's just part of my life. So yeah and then I started riding it to work three summers ago. I only ride in the summer to work and I started riding it to compete ten years ago. … About the time I met (name omitted: spouse) and he's in to the triathlons so it was something we could sort of do together. (pre-activity) I'm not really into the environmental movement, but I kind of grin when I see a Prius driving by and think I'm getting better mileage than you are (laughing). I don't know just it's a way to exercise and actually your kind more a part of the community. (pre-activity)

4.4 Support for Hypotheses

The results above provide evidence of outcome-consistency as conceptualized in expectancy-valence theory and described by the first and fifth hypotheses of the study. Results also establish a relationship between motivations and benefits that links motivations for recreation to well-being specific to hypothesis five.

1. Individuals do form motivations a priori to the recreation experience.
5. Individual recreation outings fit into a larger network of desired end states and the realization of goals from a specific recreation engagement are critical to the fulfillment of enriching one's life and well-being.

The first and fifth hypotheses describe or explain recreation behavior in the anticipation and recollection phase of the experience (Clawson & Knetsch, 1966). The second hypothesis of the study describes the emergent nature of the activity.

2. However, the actual experience, and realization of these benefits do possess emergent and contextual qualities.

There is evidence that supports the emergent and unexpected nature of the activity itself. To address the second hypothesis the *expected* and *unexpected* codes were utilized. They were defined as:

> *Expected* – anything referring to an activity emerging as they had anticipated. Code the entire passage of text that explains how the activity emerged as expected, this code might be longer than others.

Unexpected – anything referring to an activity emerging contrary to what they had anticipated. Code the entire passage of text that explains how the activity emerged as unexpected, this code might be longer than others.

After the final coding was completed 27 of the 48 activity narratives included use of the *unexpected* code. These narratives were considered examples of the emergent nature of the recreation experience. Consistent with the second hypothesis, narratives where the *unexpected* code was applied could be divided into two groups: emergent and contextual qualities related to the actual experience and/or the realization of the benefits of the activity. The two examples below were taken from memos created during the coding process:

1.) The participant had coached a running group for the past 16 years, though unexpected things were still occurring. He was unexpectedly interviewed by a TV station when coaching the running group and another training group did not show up. While being interviewed appears to have only increased his enjoyment of the activity because he felt more runners might show up, the runners' punctuality and low energy contributed to the activity not being as enjoyable as it had been in the past. Unexpected occurrences appear to be a characteristic of this participant's recreation though not a determining factor in his continued participation or his enjoyment with the particular outing. He will

continue for the next several seasons before retiring. He plans to continue volunteer work though in some different capacity (e.g., volunteering at races and offering financial advice or assistance (participant is an accountant).

2.) Frisbee golf was enjoyable though not something he thought he would continue to do outside of Alaska #15 post-activity. He did mention that there was limited access to courses back home, but that he wasn't too interested in playing back home. Motivation for the activity was primarily trying new things #15 pre-activity and being social. In this circumstance the motivation is more enduring than the activity. He would continue to be motivated to try new things not necessarily to continue to play Frisbee golf (e.g., has future goal of driving cross country). Perhaps the activity could be defined as trying new things though it's closer to a motivation.

The *expected* code was used in 21 of the 48 activity narratives that were considered not to possess emergent or contextual qualities. These examples could be grouped into three different categories. 1) The unexpected or emergent qualities of the activity were part of the experience and therefore a motivation for the activity. 2) The individuals' past experience with the activity was at such a high level that unexpected things did not occur or did not occur with any great frequency. 3) The study focused on the experience of the activity between the two interviews and something unexpected did

not occur during that particular participation in the activity though unexpected things had occurred at other times.

There is also evidence where the recreation behavior observed deviated from the expectancy-valence model. These deviations were hypothesized to be explained by hypotheses three and four.

3. The failure to meet psychological outcomes, yet being satisfied with the recreation engagement, is explained by the feedback mechanism of the expectancy-valence theory.
4. Previous experience with the activity or setting will lead to greater certainty about outcomes and increase expectancy-outcome consistency.

In addition to the third and fourth hypotheses another potential reason for some inconsistency between individuals' motives and benefits is that they might have thought of more reasons for participating in the activity in the post-activity interview. Therefore, it is possible that data from the post-activity was still expanding on the motivation construct from the first pre-activity interview.

Without considering the feedback mechanism the influence of past experience on the satisfaction achieved by individuals would be omitted. Participants were given the option to discuss whichever recreation activities they wished in the interviews. Fortunately, an adequate range of past experience was obtained. In terms of numbers of years of experience with the activity:

- seven of the 48 activity narratives' participants were either participating for the first time or had done the activity for less than one year,
- nine activity narratives represented between one and nine years of experience,
- and a majority of the activity narratives (32 of 48 narratives) participants had ten or more years of experience.

The seven activity narratives in which participants had one year or less of experience did reveal some evidence of slightly less outcome-consistency than those activities in which participants had ten or more years of experience. For example, #32 who had only been biking for about a month and half, reported being social as a motivation for biking, but made no mention of any social benefits. Participant #13 who had been trying to learn to swim for about a year reported a social benefit as an unexpected benefit of going swimming. Although only a slight difference in outcome-consistency was evident, it was supported by many of the participants who were new to the activity reporting that they were likely to reassess the activity in the near future and modify it if necessary. For example, #31 who had just begun to raise chickens for the first time reported that she might raise rabbits next year because she believed they would be less expensive and #12 who had been experimenting with a new vegetarian diet for the past year was going to reassess the value of the diet at the end of the year. It appears that people's past experience with an activity does influence outcome-consistency and that people are more likely to modify activities in which they have little past experience.

Nonetheless, motivations were clearly present a priori to the activity; however, subsequent engagement in the activity might be based on different motivations.

4.4 Modification of Hypotheses

Consistent with modified analytic induction the hypotheses in the study were descriptions of human behavior specifically with regard to recreation (Bogdan & Bilkan, 1992). While evidence was gathered to support these hypotheses through the development of a codebook, evidence was also sought that was contrary to these hypotheses. This evidence was captured through the coding process with the use of the *hot quote* code defined as: any phrase or passage of particular interest that directly addresses one of the hypotheses or model. Evidence that was contrary to one of the hypotheses consisted of participant's description of their own recreation behavior that differed from one of the hypotheses. These occurrences were also documented through the memos created during the final coding process. Consistent with the predetermined standards set for disconfirmation of a hypothesis at least 10% of the data would need to show evidence of an identifiable behavior or repeating idea that was contradictory to the hypothesis. Given the results of the sample 10% of the data would be at least five different activity narratives.

For the purpose of this study we attempted to collect information on activities that people did for some reason other than to simply pass the time or because they had nothing else to do. While the methods were successful in eliminating many of these activities there appears to be some overlap between activities that are done simply to pass

the time and those that have some other specific motivation. Evidence of this was found through examining the memos and *hot quotes*. Two examples of text coded as *hot quotes* are shown below.

> Sometimes when I just can't think of any other recreational activity at that time. Maybe I might. And there are some days that I set aside do nothing but this, just make sure that I do nothing constructive (#24 movies, pre-activity).
>
> I guess that's my, also probably boredom, if I can't do anything else. I'll pick up my knitting and I'll start doing it, but as far as like a goal, related reason to my knitting, is, yeah (#43 knitting, pre-acitivity).

This theme was present in five activity narratives, the minimum number required for modification of a hypothesis. These narratives were from five different participants. Contrary to hypothesis 5, these activities did not appear to fit into larger goals or contribute to quality of life. There was no pattern with regard to the nature of activities (i.e., the activities were not all passive or indoor activities). To consider modification of a hypothesis other theories of motivation were considered.

Tinsley and Tinsley (1986) conceptualize the relationship between need satisfaction of psychological needs and personal growth existing at three levels: leisure deficit, sufficiency, enrichment. It could be these activities represented a state of leisure deficit, in which no personal growth occurs, or leisure sufficiency, in which minimal personal growth occurs. Deci and Ryan's (2000) theory of self determination presents a model in the form of a continuum with amotivation at one end, intrinsic motivation at the other, and extrinsic motivation spanning the middle of the continuum. The self-

determined behavior is placed at the intrinsic motivation end of the continuum while non self-determined behavior is placed at the amotivation end of the continuum. Considering the motivational approach within the context of the theory of self determination it appears that some recreation activities could be placed at either end of this continuum. To account for this observed behavior the fifth hypothesis could be modified to include this aspect of motivation theory.

5. *Intrinsically motivated* individual recreation outings fit into a larger network of desired end states and the realization of goals from a specific recreation engagement are critical to the fulfillment of enriching one's life and well-being.

Chapter 5 Discussion and Conclusion

5.1 Discussion

Through examining the text coded as a *hot quote* and the activity narrative table it became apparent that a circular model would better represent the motivational approach in recreation than the existing linear model (Mannel & Kleiber, 1997; Moore & Driver, 2005). The realization of the benefits that recreation activities provide is part of an ongoing process of creating or constructing an identity. The realization of the benefits that recreation provides is a key factor leading to specific motivations regarding an activity. There is some ambiguity as to the extent to which the "linear model" representation of the motivational approach was conceptualized as a continuous process. The circular model conveys that the behavior associated with the motivational approach is a continuous process.

In the process of conceptualizing this circular model the integration of the meanings-based and motivational approaches was considered. The meanings-based approach, similar to the goals of this thesis, examines the themes and places them into the broader context of identity, well-being, and the creation of meaning. However, the meanings-based approach differs in that it is based on a process-oriented conception or a auto-telic theory. Responding to the call for a pluralistic approach (Miller et al., 2008; Patterson & Williams, 2005) a model is proposed conveying how these two approaches could complement each other (Figure 5.1). At the macro level the model reflects the basic-motivational model (Figure 1.1) reorganized into a circular form. At the micro level the meanings-based approach is represented (i.e., highly contextual and emergent

qualities of the recreation experience). The generalizable constructs exist at the macro level, while the more individual (i.e., unique or relative to one person) concepts such as understanding what specific recreation engagements mean to an individual exist at the micro level. The continuous process represented by the expectancy-valence framework at the macro level guides the context specific realization of experiences at the micro level. In turn, the individual experiences that emerge inform the macro process through the feedback mechanism. The feedback can take the form of confirming and strengthening original motivations and goals or modifying motivations and goals. A concern raised by the conceptualization of this relationship between the approaches is the ability to form a link between the constructs (i.e., motivation, satisfaction, and feedback) representative of a goal-oriented theory at the macro level and the concepts (i.e., context specific and relative to the individual) at the micro level. However, if such a relationship could be established it has the potential to further our understanding of the recreation experience.

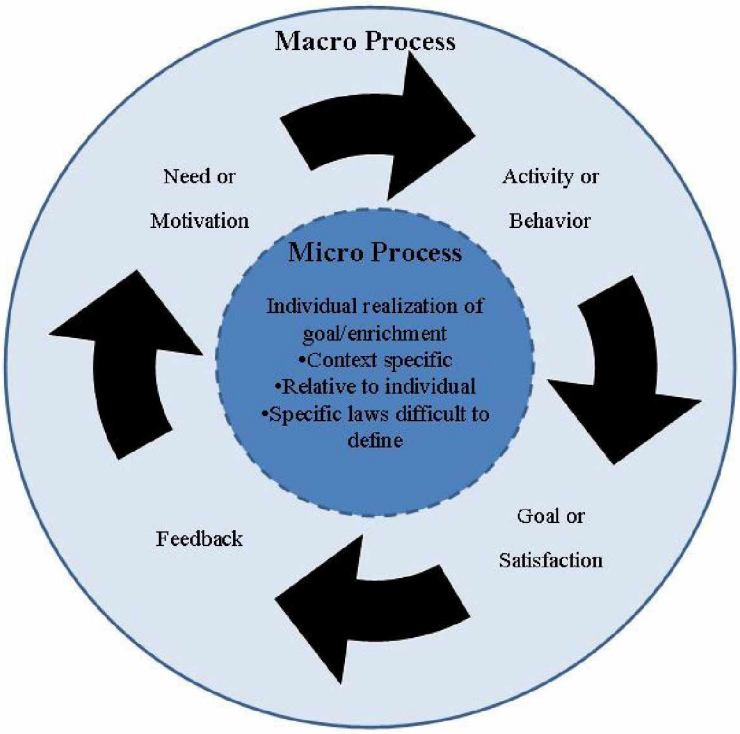

Figure 5.1 Micro/Macro Motivational Model

5.2 Conclusions

This study found support of the application of the expectancy-valence theory as applied to recreation. Empirical evidence of outcome-consistency critical to the expectancy-valence framework was supported by five concepts:

1.) Similar themes across participants,

2.) Converging patterns of unique/similar motivations across individuals,

3.) Flexible recreation activities with enduring motivations,

4.) Pre-activity motivations expressed as benefits, and

5.) High level of consistency between pre-activity motivations and post-activity benefits.

A limitation of this study due to the size of the sample is that only the constructs and theory are transferable beyond the sample (i.e., the specific motivations, benefits, etc. are not generalizable). Future research should investigate these concepts. If evidence of these concepts were found in other research this convergent validity would support the application of the expectancy-valence framework. Furthermore, their support of the expectancy-valence framework does not conflict with the concept of the emergent recreation experience consistent with the meanings-based approach.

5.2.1 Management Implications

While opposing world views (conflicting normative commitments/philosophical assumptions/paradigms) might prevent a mixed methodology within a particular study (i.e., including hermeneutics and REP scales in one study), a better understanding of how these approaches could complement each other would be of benefit to managers. This raises the questions "When should researchers apply different approaches in different studies to answer research questions?" The motivational approach would be best utilized in the development and subsequent monitoring of indicators and standards, while a meanings-based approach with a hermeneutic paradigm would inform managers of nuances in the meanings of the recreation experience. The motivational approach is able to provide generalizable results regarding the reasons people are visiting recreation areas. For example, employing the motivational approach utilizing the REP scales at a variety of publicly-provided recreation sites can result in documentation of the outputs of

recreation. This information can be used in policy decisions regarding allocation of funds and competing uses of land. In contrast, the meanings-based approach can provide a more in-depth understanding of the meanings that people create during recreation and what that means for their identities. For example, a meanings-based approach would provide valuable insight into specific recreation user groups and attachment to place that could be useful in addressing prevention or resolution of conflict. The micro/macro motivational model (Figure 5.1) provides a theoretical framework for understanding this integration of approaches.

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Appendix A. Institutional Review Board Exemption Letter for Pilot Studies

UAF UNIVERSITY OF ALASKA FAIRBANKS

Institutional Review Board

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December 2, 2009

To: Peter Fix, PhD
Principal Investigator

From: Bridget Watson
Research Integrity Administrator
Office of Research Integrity

Re: IRB Protocol Application

Thank you for submitting the IRB protocol application identified below. This protocol has been administratively reviewed and determined to meet the requirements specified in the federal regulations regarding human subjects' protections for exempt research under 45 CFR 46.101(b)(2) for research involving the use of educational test, survey procedures, interview procedures or observation of public behavior, unless: (i) information is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects, and (ii) any disclosure of the human subjects' responses outside of the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing employability, or reputation.

Protocol #:	09-55
Title:	*Pilot test for recreation motivation study.*
Level:	Exempt
Received:	November 18, 2009
Exemption Date:	December 2, 2009

If there are major changes to the scope of research or personnel involved on the project, please contact the Office of Research Integrity. Email us at fyirb@uaf.edu of call 474-7800. Contact the Office of Research Integrity if you have any questions regarding IRB policies or procedures.

Appendix B. Summary of Pilot Studies

In the first pilot study, participants were recruited from an economics class on the University of Alaska (UAF) campus and asked to complete a journal entry before and after each of their leisure activities for ten days. A goal of the first pilot study was to test the clarity of the written and oral instructions. This was especially important to this study because the aim was to measure constructs such as motivations without leading participants. Three different journals were produced with slightly differing formats (i.e., use of lines or no lines in the journal) and closed- or open-ended questions regarding participants' past experience with the activity. Participants were given one of the journals at random. All three journals asked participants to "Write down your thoughts before the activity" and to "Write down your thoughts reflecting on the activity". As an incentive for participating, those who completed the journal were entered into a raffle for a $40 gift certificate to the campus bookstore.

Results from the first pilot test revealed issues with the response rate, clarity of the instructions, and the measurement of the desired constructs (i.e., motivations and benefits). Of the 18 students in the class that were issued journals only four returned completed journals. While the poor response rate was not of concern with regard to making generalizations from the sample, there was a concern that certain recreation behavior patterns were omitted from the sample. For example, people who might be more spontaneous with their recreation activities might not have been able to complete journal entries prior to their activities and therefore failed to return the journal. The participants that completed the journals did not report any difficulty with completing

entries before and after each of their activities. However, it was considered that the frequent journal entries required might have presented too great a burden for those who did not return journals. The incentive of entering a raffle for a gift certificate to the campus bookstore might not have provided enough motivation to complete the journal. Participants who completed the journals reported that they had difficulty determining what activities to include in the journal. Furthermore, some of the activities they included (e.g. "watching television to kill time") were determined to not be of use in this study because of their lack of importance to the participant. Also, their responses to their "thoughts" before and after their activities were too vague (e.g., "going to have fun") and often was more a description of the activity itself rather than an explanation of their motivations and benefits. A second pilot study was needed that increased the response rate, clarified what activities to include, and collected more detailed information regarding participants' motivations and benefits.

The changes made in the second pilot study reflected what was learned from the first pilot study. The same journal format (i.e., entrees before and after activities) and ten-day time period was utilized. To increase the response rate participants were recruited from three different classes on campus and a compensation of $35 was provided to each participant that successfully completed and returned a journal. To clarify what activities were included several steps were taken. First, the term "recreation activities" replaced "leisure activities". Second, a section was added to the journal that included examples of what activities to include and what activities not to include. Finally, an informational meeting was scheduled so that instructions could be provided uniformly,

coherently, and without distractions. To examine the effects of alternative wording of questions two sets of questions were tested. The first set was identical to the first pilot study with regard to inquiring about the participants' thoughts and the second asked participants "What are some of the reasons you are participating in this activity?" and "Reflect on the activity with regard to what made it enjoyable or not enjoyable."

The changes made in the second pilot study clarified what activities were included, though failed to produce an improved response rate and resolve the vague responses with regard to measuring motivations and benefits. Eight of the 15 individuals who agreed to participate in the study attended the informational meeting where the journals were distributed and of those eight individuals four returned journals. The responses to the questions with regard to reasons for participating and whether the activity was enjoyable resulted in more consistent responses that explained their motivations and benefits than the set questions with more vague instructions regarding participants' thoughts. However, participants' responses were still too vague for the purpose of this study and did not elaborate on their thoughts regarding the activity. The results from the second pilot study helped to determine terminology (e.g. "recreation activities", "reasons", and "enjoyable or not enjoyable") that would be successful in collecting the desired information though the response rate and vagueness of responses remained an issue.

In the third and final pilot study, a set of two semi-structured interviews was conducted one week apart with three individuals. A set of two interviews would maintain the longitudinal component of the study, while the semi-structured interview format was

intended to collect more refined data regarding individuals' motivations and benefits. An incentive was not provided to participants, and they were not compensated for their time. While participants were recruited from the graduate school at UAF and were acquaintances of the researcher, they had no knowledge of the study or the research field. The pre-activity and post-activity format provided a complete narrative of the activity. The semi-structured interview questions were adapted directly from the journal used in the second pilot test. The semi-structured interview format allowed for consistency with regard to the wording of the questions and the terminology. For example, to measure motivations participants were asked in the pre-activity interview what their "reasons" were for participating in a particular activity. The interviews were audio recorded and transcribed. It was necessary to collect information in the first interview on recreation activities in which they believed they would participate in the immediate future. Given this consideration and the results from previous pilot studies the following criteria were given for activities: 1.) a recreation activity that you do in your free time (i.e., not something for which you would receive monetary compensation), 2.) not something that you would do just to kill time, and 3.) an activity that you are likely to do or plan to do in the next week.

The final pilot study resolved the issues from previous pilot studies. The dual-sample or pre-activity and post-activity interview format was less of a burden to participants than the journals of the previous pilot studies. All three participants attended both the pre-activity and post-activity interviews. In contrast to the journal format, the interviewer was able to ask follow-up questions or probe topics of interest to the study.

Participants also provided more information regarding their thoughts before and after their recreation activities.

Appendix C. Semi-Structured Pre-Activity Interview

Pre-interview script

I am conducting a study that investigates people's thought process with regard to recreation activities. Recreation activities are anything you might do with the free time in your day, and include indoor activities such as video games or crafts and outdoor recreation activities.

For this interview I'll be asking you questions regarding your recreation activities. Some of the questions will be repetitive, but it is important that we have this information for all the recreation activities we discuss. This interview will be tape recorded. Although we will only be talking about your recreation activities, this information will still be kept confidential and only used for the purpose of this study.

I'll also schedule a follow-up interview for next week. Neither interview should take longer than an hour.

Participation in this study is voluntary and we can stop the interview at anytime.

Thank you for your participation.

Do you have any questions before we get started?

Interview questions

1) Tell me about what recreation activities you have planned for this weekend or next week.

   [Create list of 3 or more recreation activities.]

2) Is there a recreation activity that you're going to participate in for the first time in the next couple of weeks? Or is there an activity that you'll participate in for the first time at a new location?

   [Make note of activity and include as one of the activities discussed.]

   [Select **3 to 5 activities** to discuss in detail. From those activities proceed with the following questions. Then select another activity and go through the same questions again.]

3) Tell me more about (insert selected activity).

[For the questions below estimates are ok, but some quantification is important]

(a) For approximately how many years have you been (insert activity)?

(b) In the past **six months** approximately how many times a week have you (insert activity)?

(c) Do you always (insert activity) at the same place?

(d) If not, how many *different places* have you (insert activity) in the **past year**?

[Ask participant to list different places they have participated in activity]

(e) Is there anything that makes any of these places special or important?

4) Does this activity fit into any *larger personal goals or projects* you have in your life?

If yes, then:

Are there other activities that are part of this *personal goal or project*?

Do you think these *personal goals or projects* contribute to your quality of life? If so how?

5) How do you see or not see this activity as *representative* of the kind of person you are? (or how does this activity help to *identify* who you are?)

6) What would be the impact if you couldn't participate in this activity? How would your life be different?

7) Specifically with regard to *this weekend or next week*, what are some of the reasons you are going to participate in this activity?

[Focus on participation in a particular activity (e.g. swimming Tuesday evening, hiking this Sunday, etc.). Ask participants to try to elaborate on particularly vague responses e.g. because its "fun", because I "like" to do it or, because I "enjoy" the particular activity". Follow-up questions should ask them to specify why the activity is fun and/or what makes it good or enjoyable.]

Appendix D. Semi-Structured Post-Activity Interview

Pre-interview script

Thank you for coming back. I'd like to remind you that participation in this study is voluntary and we can stop the interview at anytime. This interview will also be recorded. Thank you again for your participation.

Do you have any questions before we get started?

Interview questions

1) When we met last week we discussed (insert list of activities from pre-interview, other activities can be discussed, but these activities need to be included). I'd like to hear about how (insert particular activity) went. Did you end up doing (insert particular activity)?

   [Go through each activity that was discussed in the pre-interview]

2) Was the activity enjoyable? What made the activity enjoyable or not enjoyable?

   [Ask participants to try to elaborate on particularly vague responses e.g. because its "fun", because I "like" to do it or, because I "enjoy" the particular activity". Follow-up questions should ask them to specify why the activity is fun and/or what makes it good or enjoyable.]

3) Did anything unexpected occur?

   [Try to determine whether any unexpected occurrence was related to an activity or setting and if it related to any potential enjoyment or satisfaction with the activity.]

4) If yes, was the activity enjoyable or not enjoyable and for what reasons?

5) Will you participate again? Why or why not?

   [Again, ask participants to try to elaborate on particularly vague responses. Repeat questions two through four for all of the activities discussed the first time]

Repeat questions one through five for all of the activities discussed in the pre-activity interview before continuing.

6) Do you try any new recreation activities since we last talked? Maybe an activity that you didn't plan or expect to do?

7) Are there recreation activities that you no longer do? If so, what are they and why don't you participate anymore?

8) Are there recreation activities that avoid? If so what are they and why do you avoid them?

Are there activities that you would like to do that you haven't for some reason? If so what are and they and why haven't you participated?

Appendix E. Institutional Review Board Exemption Letter for Full Study

UAF
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Institutional Review Board

909 N Koyukuk Dr. Suite 212, P.O. Box 757270, Fairbanks, Alaska 99775-7270

June 10, 2010

To: Peter Fix
Principal Investigator

From: University of Alaska Fairbanks IRB

Re: [174997-1] Recreation Motivation Study

Thank you for submitting the New Project referenced below. The submission was handled by Exempt Review. The Office of Research Integrity has determined that the proposed research qualifies for exemption from the requirements of 45 CFR 46. This exemption does not waive the researchers' responsibility to adhere to basic ethical principles for the responsible conduct of research and discipline specific professional standards.

Title:	Recreation Motivation Study
Received:	June 4, 2010
Exemption Category:	2
Effective Date:	June 10, 2010

This action is included on the June 25, 2010 IRB Agenda.

Prior to making substantive changes to the scope of research, research tools, or personnel involved on the project, please contact the Office of Research Integrity to determine whether or not additional review is required. Additional review is not required for small editorial changes to improve the clarity or readability of the research tools or other documents.

Appendix F. Final Codebook

Codes

Motivation – any reason why someone might participate in a particular recreation activity or activities. Include needs and code in reference to future events during the anticipation phase of the recreation experience. Include social influences that contribute to their participation in the activity as a motivation. Motivations could be coded in either pre or post activity interviews. Pay careful attention to context (i.e. was the quote in response to asking their reasons for participating or in reference to the next time they will participate) and verb tense (i.e. past tense could refer to a *benefit*, while future tense would refer to a *motivation*).

Coding guidelines: link motivations regarding a particular activity that is discussed at length in the interview to that activity (e.g. motivation 23 – biking). Use the generic *motivation* code for all other instances where a motivation is expressed.

Code examples:

"To be in shape for the marathon and if I eat my chocolate moose tonight and then I'll go running tomorrow, no just to be healthy and to get out of the house a little bit" (#42 pre-activity, line 258) and
"I look forward to the gathering of friends." (#24 pre-activity, line 194).

Larger goals – major motivations or projects that play into one or more activity and/or are not achieved immediately, but rather over a long period of time. A *larger goal* could include one or more specific motivations and/or activities. Code examples:

"…running a marathon and if it goes well maybe I'll try and run another one somewhere else someday," (#42 pre-activity, line 274) and
"I think just the standard goal of anybody who's picked up an instrument is ya know at least one point in your life you'd like to get together a band and go on stage" (#11 pre-activity, line 374).

Benefit – any positive outcome related to a particular recreation activity or activities. This code is distinguished from *motivations* by occurring post-activity during the recollection phase of the experience. Code anything in reference to wellness or quality of life as a *benefit*. *Benefits* could be coded in either pre or post activity interviews. Pay careful attention to context (i.e. was the quote in response to asking their reasons for participating) verb tense (i.e. past tense could refer to a *benefit*, while future tense would refer to a *motivation*).

Coding guidelines: link benefits regarding a particular activity that is discussed at length in the interview to that activity (e.g. benefit 23 – biking). Use the generic *benefit* code for all other instances where a motivation is expressed.

Code examples:

"Being outside and yeah, being outside and having a little time to do something by myself." (#42 post-activity, line 42) and
"And this time I was a little more confident so I went a lot faster, a lot less brake riding." (#33 post-activity, line 70).

Disbenefit – A negative psychological or physical outcome of an activity that has had an impact on the participant's life. This impact has been interpreted or judged to be negative by the participant. For example, any mention of isolation, addiction, impact on friendship/
relationships, general health, school, or work. Code example:

"Well I've been writing a lot for this upcoming season during the summer just I found that a lot of times because this kind of my baby that I will often put off school work to work on this and that's not always the smartest thing to do." (#11 pre-activity, line 126).

Impact Benefit – benefit associated with the impact on a person's life if they were no longer able to participate in the activity. Code example:

"I: Yeah, ok. So how do you think your life would be different or how do you think you'd be impacted if there was no crafty group?

P: I would not know as many people and would not probably - it's been a really cool jumping off - like a cool starting place and yeah like met so many people and it's really fun that way and just knowledge like knowledge sharing and I wouldn't know how to make a mitten. I would still be trying to make a mitten. (laughing) I would still be failing so." (#32 pre-activity, line 572)

Identity – anything in regard to an aspect representing the participant relating to their past, (e.g. something related to their upbringing) or future goals (e.g. "becoming somebody who is independent"). Code examples:

"I'm a very social person. I'm a very touchy person. That might contribute, I'm single. So I like to dance, meet a lot of people. I guess those, yeah, those all contribute." (#33 pre-activity, line 348) and

"You know with me it's just like recreational activities I mean I'm not the most skilled or dexterous person in the world, but ya know I've always believed in hustle." (#11 pre-activity, line 266).

Past experience – anything relating to the past experience of the individual with the activity including, but not limited to:

- the number of times they participate in the activity per week,
- the length of time they participate in the activity per week or daily,
- the number of years they have participated in the activity, and
- different places they have participated in the activity.

The *past experience* code will most likely in response to questions in the pre-activity interviews though may be coded anywhere in the transcripts.

Utility codes

Activity – any passage that discusses anything relevant to a particular recreation activity discussed by the participant in both the pre and post activity interviews. These codes will represent the majority of the interviews.

Hot Quote – any phrase or passage of particular interest that directly addresses one of the hypotheses or model. Add a brief description of why the quote confirms or disconfirms the hypothesis or the model. Also include any evidence of participant taking into account constraints, setting, motivations, etc. and making a decision regarding an activity base on the information available. Quotes from this code will be used to address modifications and/or confirmations of the hypotheses.

Inverse Codes

Facilitator – anything regarding an opportunity or practical reason why someone might participant in an activity. Most frequently the availability of time and money, though could be just about anything (i.e. convenience of activity such as running or the skill and/or ability to participate in an activity). The opposite of *facilitator* should be coded as *deterrent*.	*Deterrent* – anything regarding a reason why someone might <u>not</u> participant in an activity. Most frequently the absence of time and money though could be other reasons (i.e. limited access to internet could be a deterrent to surfing the web). This code is similar to the concept of constraints. Include mention of undesirable experiences or motivations (e.g. not mountain climbing because of perceived danger). The opposite of *deterrent* could be coded as *facilitator* or a *motivation*.
Setting: facilitator – anything regarding setting that enables, enhances, or makes more feasible a particular activity. This code is similar to the more general code *facilitator*, however refers specifically to setting (e.g. Nenana River, Howling Dog, France, Nepal, etc.).	*Setting: deterrent* – anything regarding setting that makes participation in a particular activity more difficult. This code is similar to the more general code *deterrent*, however refers particularly to setting (e.g. Nenana River, Howling Dog, France, Nepal, etc.).
Expected – anything referring to an activity emerging as they had anticipated. Code the entire passage of text that explains how the activity emerged as expected, this code might be longer than others.	*Unexpected* – anything referring to an activity emerging contrary to what they had anticipated. Code the entire passage of text that explains how the activity emerged as unexpected, this code might be longer than others.

Appendix G. Activity Narrative Table[6]

Participant #, age, gender, & activity	Past experience	Motivation	Emergent or unexpected experience	Benefit	Larger goals	Well-being or identity	Modification of activity & substitution
#11 36 year-old male Base guitar	He had played for the past ten years and gotten more "serious" in the last three. Currently playing daily.	Stay in practice, personal challenge, create something new/ unique/ different every time, play with others, introduce people to music, flexibility	He snapped a string on his guitar and did not play with some of the people he was expecting to. While this altered the activity it did not appear to have much of an effect on his enjoyment of the activity.	Socialize, overcoming challenge, playing something new, introduce people to obscure bands, impress people	Play in a band on stage	Part of personality, expresses individuality	Will continue the activity in the same manner. Substitute with listening to more music, video games, and more writing

[6] Information was compiled for this table from both the pre- and post-activity interview transcripts.

Participant #, age, gender, & activity	Past experience	Motivation	Emergent or unexpected experience
#11 36 year-old male Biking	He had biked since he was a kid and was currently biking two or three times a week.	Workout, low impact on body, personal challenge, freedom to access places, go long distances, use of bikes as best modern transport technology, self powered, used to being active and gets antsy, health (specifically weight control), getting out in the weather, keeping warm on cold day	"Not that I would consider it unexpected, I mean it's unexpected when it happens, but you know you should expect when it's rainy and wet to go parallel to the ground when you hit a few wet roots." (post-activity)

Benefit	Larger goals	Well-being or identity	Modification of activity & substitution
Stress release, body and mind feel good, workout, see friends, freedom to go places, low impact on body, speed, wind in the hair, getting out of control, feeling and acting like a kid, warm up on a cold day, testing limits (e.g. go out on muddy trail, spectacular falls)	"I've been toying around with the idea at least with biking of ya know biking the Alaska Highway. Ya know I'd say probably - I'd say my goal would be - I'd like to bike back for my twentieth high school reunion back in Oregon." (post-activity)	"That's another great outlet too because you can work out the stress you deal with it physically and then as a result because your body feels good it helps your mind feel better. I mean and that's kind of a cliché thing, but it's true." (pre-activity)	Will continue the activity in the same manner. Substitute by martial arts and playing more hockey

Participant #, age, gender, & activity	Past experience	Motivation	Emergent or unexpected experience
#11 36 year-old male Writing for radio	He had been on the radio for the past 18 years. He has been working on the current project of writing a show for the radio for the past 8 months. Currently he has been spending between 15 and 20 hours per week writing.	Challenge, broaden creative outlet, start writing something different after failures, sense of accomplish-ment, stay in practice, keep intellectually engaged, avoid distractions, communicate, convey sense of identity, avoid writing inconsistencies, pushing limits, act like a kid	He did not report anything unexpected related to this activity.

Benefit	Larger goals	Well-being or identity	Modification of activity & substitution
Unique/ entertaining show, getting more popular, developing material, impress people, overcoming challenge, learning, avenue for creativity, coping mechanism, alternate reality, better form of communication convey sense of identity, telling a story, share with people, sense of independence, sense of accomplishment	Syndication of radio show	"It helps me to I think explain to others who don't have a similar background or view on things" (pre-activity)	Will continue the activity in the same manner. Substitute by exercising more and playing more hockey

Participant #, age, gender, & activity	Past experience	Motivation	Emergent or unexpected experience
#12 43 year-old male Cooking (diet)	He had been experimenting with a vegetarian diet for the past year. Currently it was taking him anywhere from a half hour to hour to prepare dinner each evening.	Nutritional decision, reaction to food processing, feeling useful, conversation at dinner time, healthy lifestyle, perform better in triathlons, avoiding the "meat factory"	Surprised that he liked certain new foods that he tried.

Benefit	Larger goals	Well-being or identity	Modification of activity & substitution
Improved athletic performance leaner feeling younger than actual age supporting local business trying out new recipes enjoying new foods, tasty foods	Vegetarian diet	"Frankly we eat better then most people, we eat a much more varied and balanced diet." (pre-activity)	He will reassess the value of the diet at the end of the year though he'll continue to eat home cooked, "healthy" meals. Would not be as healthy, no substitution stated

Participant #, age, gender, & activity	Past experience	Motivation	Emergent or unexpected experience
#12 43 year-old male Coaching (volunteering)	He had volunteered as coach of a running group for the past 16 years. The group meets every Tuesday over the summer.	Giving back, making up for not volunteering at races, helping people realize what they're capable of, see people improve, thinks of new analogies, new ways of explaining something	Several unexpected things occurred. He was interviewed by the press, a coach for another training group did not show, and his running group has not been as motivated as it has been in past years. All but the last occurrence did not appear to affect his enjoyment of the activity.

Benefit	Larger goals	Well-being or identity	Modification of activity & substitution
Empowering people new people watching "newbies" show up and improve throughout the season diligence of others helping others live a healthy lifestyle provide social network for others	Has had a goal of coaching the running group for 20 years.	"As I've gotten older I've seen the ways, but it's just you feel better for it and so from an overall stress slash quality of life, just the way you feel you know your calmer." (pre-activity)	He will continue for the next several seasons before retiring. He plans to continue volunteer work though in some different capacity. Substitute with doing more volunteering at races

Participant #, age, gender, & activity	Past experience	Motivation	Emergent or unexpected experience
#13 23 year-old male Cricket	He has been playing cricket since his childhood (for about the past 15 or 16 years). Currently he was playing cricket about every other day.	Escape boredom, keep engaged, stay out of trouble, to make time pass quickly, workout, social, to play certain aspects of game	Performed better in a game of cricket than he had in the past. This was source of enjoyment for him.

Benefit	Larger goals	Well-being or identity	Modification of activity & substitution
Feel happy, provides productive use of free time, likes the idea of having a pass time, keeps mentally engaged, good performance	Stay happy, escape boredom	"I mean like as I said in the last week I just go and play like to spend some time there, just like. It keeps my - I mean like keeps my brain activity. Any kind of activity. So I just play, I feel happy while playing cricket, yeah."(post-activity)	Will continue the activity in the same manner. Substitute with pool & table tennis

Participant #, age, gender, & activity	Past experience	Motivation	Emergent or unexpected experience
#13 23 year-old male Swimming	He started to learn to swim when he came to Fairbanks about one year ago. Currently he was swimming three times a week.	Learn/ improve skill, essential survival skill, motivation stemmed from way he was brought up, workout	He mentioned that it was somewhat surprising that many new friends are joining him to go swimming and that this added to his enjoyment of the activity.

Benefit	Larger goals	Well-being or identity	Modification of activity & substitution
Social, successfully teaching himself, seeing improvement	Learning to swim	He felt that swimming was something that people should know how to do. Learning to swim, along with improving his English a second language for him, was part of acquiring skills that he felt people should know.	"I will try for the coming two months, if I am like ok I'm making some progress in that, ok fine. If not I will take a class." (pre-activity) Question not asked in interview.

Participant #, age, gender, & activity	Past experience	Motivation	Emergent or unexpected experience
#13 23 year-old male Movies	He had watched movies since he was a child. Currently he was watching about one movie a day.	Escape boredom, keep mind engaged, source of inspiration to create inventions, have unexpected experience	He did not report anything unexpected related to this activity.

Benefit	Larger goals	Well-being or identity	Modification of activity & substitution
Movies provide inspiration to create new things as an engineer, makes heart feel good, seeing a good movie without prior expectations, didn't see time pass, completely engaged in movie	"Moreover the most important thing is that it will keep me away from being bored." (pre-activity)	Identified with people from India enjoying and watching a lot of movies and connected his profession of engineering with his enjoyment of science fiction movies.	Will continue the activity in the same manner. Question not asked in interview

Participant #, age, gender, & activity	Past experience	Motivation	Emergent or unexpected experience
#15 25 year-old male Frisbee golf	He had just started to play within the past month.	To gain the experience, to bring something back home, curious, exercise, social, sharing with others	Grass on one of the holes was cut. This added to his enjoyment because Frisbees were not as easily lost.

Benefit	Larger goals	Well-being or identity	Modification of activity & substitution
Experience to take back home, picking up the game, doing something out of the ordinary, something different, active, "physical" and "social" aspect	Part of trying new things, gaining new experiences	"Learn about new things, keep an open mind to things, ya know and not be afraid to give them a try because you never know what'll happen." (pre-activity)	Will continue to play Frisbee golf so long as he has access to a course. States that is was an enjoyable and a weird zany experience, but he would really notice if he wasn't able to do it, no substitution stated

Participant #, age, gender, & activity	Past experience	Motivation	Emergent or unexpected experience
#15 25 year-old male Exploring Alaska	He had come to Fairbanks to work over the summer and had been exploring the state.	Trying new things, having new experiences, understanding of other areas	It started to rain while he was waiting for the bus. He reported that, "it was uh unexpected but uh a neat experience." (post-activity)

Benefit	Larger goals	Well-being or identity	Modification of activity & substitution
Haven't done it before, better understanding of Alaska and people	Gain an understanding of other areas and cultures.	"I have an adventurous side and I like trying these different things and just really expanding my personal knowledge based on my experiences." (pre-activity)	Will continue the activity in the same manner. No substitution mentioned, stated he'd probably just be back home having a "regular old summer"

Participant #, age, gender, & activity	Past experience	Motivation	Emergent or unexpected experience
#21 52 year-old male Photography	He had been doing photography since he was 13 or 14 years old. He was currently doing photography everyday.	Love of wildlife, portraits in Asia, travel to unusual places, role model photographers, personal record, documenting makes travel more real/ proves it, unique, creativity, technology, get a few excellent shots possibly to sell, nostalgia.	Nothing unexpected while participating in activity between interviews though reported he's frequently surprised at what comes out of his photography (i.e. he thinks he has a great photograph and he doesn't or the opposite).

Benefit	Larger goals	Well-being or identity	Modification of activity & substitution
Has seen unusual places and cultures, travel becomes more real through photography, historical/ personal record, combining creativity and technology, learning, occasionally surprise excellent shot/ selling pictures, gets predictable small percentage of good shots.	Same goal as above with regard to completing book that will include both his writing and photographs.	Contributes to identity of a traveler.	Will continue the activity in the same manner. No substitution mentioned, would really struggle with being sedentary

Participant #, age, gender, & activity	Past experience	Motivation	Emergent or unexpected experience
#21 52 year-old male Writing (working on book)	He had been working on writing a book for the past ten years. He was currently working on it everyday.	Finishing book, sense of accomplishment, document personal experiences, produce cohesive record of travels, pride, publish/ sell, documenting makes travel more real/ proves it	Didn't expect book would take this long to write when he started. Found that he liked working with computers. The only unexpected occurrence between interviews was that he was surprised by the length of the book.

Benefit	Larger goals	Well-being or identity	Modification of activity & substitution
Documenting makes travel real, personal record, creativity, finished product, sense of accomplishment, almost done with book, improved on other authors' writing	He stated with regard to finishing the book, "It's just a project I want to finish. Yeah. It's definitely a project I want to finish. Then I can move on to something else"	Identifies with being a writer, trying to accomplish completing and publishing a book	Will continue the activity in the same manner. Substitute with building birch bark canoes or being a hunting guide

Participant #, age, gender, & activity	Past experience	Motivation	Emergent or unexpected experience
#22 22 year-old male Playing guitar	He had been playing guitar since he was 16. Depending on the week, he plays between four and ten times per week.	Making friend happy/helping a friend, social, therapeutic purposes, experiment	He did not report anything unexpected related to the activity.

Benefit	Larger goals	Well-being or identity	Modification of activity & substitution
Fulfilling, to be happy ability to change life for the better, people watch him play	"Therapeutic purposes"	"I don't really label myself as a musician or a guitar player or anything, it does help me feel more like myself from time to time, so I suppose it is representative of who I am." (pre-activity)	Will continue the activity in the same manner. Substitute with some other form of musical expression

Participant #, age, gender, & activity	Past experience	Motivation	Emergent or unexpected experience
#22 22 year-old male Music festival	He had been going to music festivals since he was 18. In the past six months he had only been to one though he was interviewed mid-summer and he had plans to go to several more.	Help friend play music wants to contribute, have people hear music non-profit, prefers to for-profit festivals make other people happy gain perspective produce a good life something new (has never been to particular venue)	"Well, uh, they gave us some free beer chips. Got two free beers out of it. That was good." (post-activity)

Benefit	Larger goals	Well-being or identity	Modification of activity & substitution
Fulfilling, to be happy ability to change life for the better people watch him play	"Trying to feel happy I guess. Feel good about myself and stuff." (pre-activity)	"It helps me to gain perspective about my, um, my deeper intentions that I may not be aware of, it lets me bring them into perspective by, you know, allowing, using my actions to produce an effect that correlates to what I have as a vision of a good life." (pre-activity)	Will continue the activity in the same manner. No substitution mentioned, might be a little relieved that he didn't have to deal with he anxiety of being around people

Participant #, age, gender, & activity	Past experience	Motivation	Emergent or unexpected experience
#22 22 year-old male Drawing	He had drawn since he was about 5 years old and continues to draw one to four times per week.	Active expression of life, creativity, "to get an idea out of my head", "productive escape", soothing activity, relaxing	He did not report anything unexpected related to the activity.

Benefit	Larger goals	Well-being or identity	Modification of activity & substitution
Feels good, satisfaction from seeing a picture on the wall, ability to relate to others, nostalgic activity, helps pass the time	"Way of connecting to people and relating to the world around me"	"It's just a nostalgic activity like I said since I've done it since I was young. I do feel nostalgic about it," "I have an escapist mentality a lot of the time." (pre-activity)	Will continue the activity in the same manner. Question not asked in interview

Participant #, age, gender, & activity	Past experience	Motivation	Emergent or unexpected experience
#23 36 year-old male Fishing	He began fishing at the age of ten in Japan. He had been fishing about twice a week, although recently had been fishing only twice a week because his girlfriend was pregnant and that was taking time away from fishing.	Almost instinctual need to go, eat good food, nutrition for future baby, provide food for family, mental break, being away from work, exploring/ appreciate surroundings, be outside, enjoy summer, teach future son, part of lifelong exercise activity, family outing, social, feel connected to food	More difficult access to fishing areas because of higher water. This does not appear to have had any affect on his enjoyment of the activity.

Benefit	Larger goals	Well-being or identity	Modification of activity & substitution
Get fish to eat, learning, lifetime memories, feel connected to place, feel happy, fish followed lure, appreciate outdoors, be out with girlfriend and dog, feeling of quick holiday	Activity that he can continue as he ages.	Ability to fish for himself, contributes to identity of becoming a father	Will continue the activity in the same manner. Substitute with biking or some other exercise

Participant #, age, gender, & activity	Past experience	Motivation	Emergent or unexpected experience
#23 36 year-old male Biking	He started riding his bike for recreation when he moved from Japan to Alaska 16 years ago. He still bikes to work though he now considers it more recreation. He rides his bike three to seven times per week.	Transportation, ageing, exercise, feel better, wake up for work/ recover from work, sweat, enjoy summer, be more active, let dog run, social, appreciate natural surroundings	Trail was unexpectedly in better shape than he thought he would be and he saw more people than he expected. Neither of these occurrences appears to have effected his enjoyment of the activity.

Benefit	Larger goals	Well-being or identity	Modification of activity & substitution
Enjoys Fairbanks, appreciates nature, breath fresh air, exercise, ageing, coping with daily problems, mental break, social, healthy, workout, dog behaved well	Long bike trip with girl friend	Recognizes role and benefit of exercise in healthy lifestyle and improved self-esteem	Will continue the activity in the same manner. Substitute with biking, or swimming or skiing exercises

Participant #, age, gender, & activity	Past experience	Motivation	Emergent or unexpected experience
#23 36 year-old male Jogging	He started running when he was in high school and currently was jogging two or three time per week.	Feel better, feel like being active, be outside, be with girlfriend, walk dog, exercise, loose weight, be fit for job to make work easier, ageing, be alone, get in tune with own body	He did not report anything unexpected related to this activity, although he did state, "…if I'm satisfied, with what I jogged, then I'll be happy. If I'm not, I'll try do something else… Or go more next day." (pre-activity)

Benefit	Larger goals	Well-being or identity	Modification of activity & substitution
Knees felt good, enjoy natural surroundings, healthy, personal self-satisfaction, relaxed, dog enjoyed, challenge self, live in the moment, mental break, feel in tune with own body	Loose a little more weight, activity that he can continue as he ages.	Contributes to mental and physical health.	Will continue the activity in the same manner. Substitute with biking or fishing

Participant #, age, gender, & activity	Past experience	Motivation	Emergent or unexpected experience
#24 26 year-old male Movies	He had been watching movies for as long as he could remember and was currently watching about three movies per week.	Feeling that he needs a good movie, able to relate to them, educational, relaxing	He stated that at times his expectations for movies are too high and this "kills the pleasure". This was not in reference to the particular activity examined by the study rather in general when his expectations of the movie are not met.

Benefit	Larger goals	Well-being or identity	Modification of activity & substitution
Better understanding of social situations, new idea, interesting , sharing with others, experiencing the world through other minds, realization of human experience, relaxing	"I don't think I set goals on movies ya know but I feel it's part of learning. Learning many, many ways talking ya know, good movie, a good book." (pre-activity)	"I think I love learning ya know so that shows itself maybe in my choice of movies even." (pre-activity)	Will continue the activity in the same manner. Substitution not mentioned, would miss movies because of creativity need

Participant #, age, gender, & activity	Past experience	Motivation	Emergent or unexpected experience
#24 26 year-old male Soccer	"Yes, from the day I could stand up I guess I started playing soccer." Currently he was playing soccer about twice a week.	Gathering of friends, Social, become tired, exercise, important opportunity to socialize, stress release, performance, creativity	He had blisters on his feet from wearing new shoes. He also mentioned a few hard tackles during the game that were unexpected.

Benefit	Larger goals	Well-being or identity	Modification of activity & substitution
Provides a different type of thing to do, working together, new people, friends, not just to kill time, added importance to activity	Stress release	"I strongly believe I cannot function properly ya know just in one task or one thing studying all the time. I can't function so well in that." (pre-activity)	Will continue to play soccer though in the week following the post activity interview he was going to go swimming instead to allow his blisters to heal. Substitute with another sport that might not be as much fun

Participant #, age, gender, & activity	Past experience	Motivation	Emergent or unexpected experience
#24 26 year-old male Lectures	He had been listening to lectures for about the past 10 to 15 years and was currently listening to about one lecture per week.	Craving for learning, gain something, learn something, inspiration	He did not report anything unexpected related to this activity.

Benefit	Larger goals	Well-being or identity	Modification of activity & substitution
Craving for learning satisfied, interesting, pleasure from things that really interest him, something new	"So it's more just I want recreation, I want sensible recreation, I want something that's going to help me." (pre-activity)	"I believe - I believe in learning form those who know and lectures just give me that forum cause happily would you come out to do something and you're not ready for it, you know so it give me that opportunity to learn." (pre-activity)	Will continue the activity in the same manner. Substitute with reading (memoirs or biographies) because his enjoys story telling

Participant #, age, gender, & activity	Past experience	Motivation	Emergent or unexpected experience
#31 26 year-old female Chickens	She had never raised chickens before. They required attention on a daily basis.	Provide food for self, more accessible than hunting, ethical principles against meat industry, feel connected to food, learning practical knowledge, be independent, improve quality of life in winter	It was unexpected that the chicks were all healthy and that she accidently killed one of them. Neither of these occurrences appeared to have any influence on her enjoyment of the activity.

Benefit	Larger goals	Well-being or identity	Modification of activity & substitution
Improved quality of life, clear conscience, healthy chickens, raising own meat, not buying store chicken, feel good, responsibility for actions and outcome, sense of satisfaction	Living a more self-sustainable, independent lifestyle.	"I'd like to be more well-rounded. I think it's, it moves me towards being the person that I'd like to be. Like being more self-sufficient. And I like practical knowledge, have a lot of it, I'm a book person, philosophy person, so having practical skills feels good." (pre-activity)	Will continue goal of living a more self-sustainable and independent lifestyle though will might raise rabbits next year to learn something new and because they are less expensive than chickens. Substitution not mentioned.

Participant #, age, gender, & activity	Past experience	Motivation	Emergent or unexpected experience
#31 26 year-old female Dogs	She has had dogs since she was nine and currently owns four. She either walked or played with them in yard 3 to 4 four times per week.	Loves disposition of dogs, interaction with self, safety, explore surroundings	One of her dogs was injured though was recovering well and behaved well at the dog park. She reported that this added to her enjoyment.

Benefit	Larger goals	Well-being or identity	Modification of activity & substitution
Wear out dog(s), feel like good owner, good owner-dog relationship, sense of satisfaction, social, enjoy weather, get outside in very cold weather	Didn't view dogs fitting into any larger goal or project. Saw the benefit in owning them, though saw them mostly as an "indulgence".	Views herself as a "dog person".	Will continue the activity in the same manner. Substitute with read a book, watch a movie, or stay inside, would have more money, but be more lonely

Participant #, age, gender, & activity	Past experience	Motivation	Emergent or unexpected experience
#32 22 year-old female Mushroom picking	"Since I could walk like my dad's been taking me hunting and mushroom picking" Has gone mushroom picking about three times in the past year.	Going with different people, Excitement, summer activity, freedom, contributing to food supply	Found more mushrooms than expected. This appears to have added to her enjoyment of the activity.

Benefit	Larger goals	Well-being or identity	Modification of activity & substitution
Excitement related to gathering, successfully harvested a lot of mushrooms	Larger goal of collecting her own food.	"I'm directly contributing to my food and which is important to me." (pre-activity)	Will continue the activity in the same manner. Would substitute, although did not specify what activity

Participant #, age, gender, & activity	Past experience	Motivation	Emergent or unexpected experience
#32 22 year-old female Running	She had run "pretty regularly since middle school" and was currently running a couple times a week.	To wind down, calm down peace of mind, maintain sanity, do something with dog, healthy, to feel better, used to being active	She did not report anything unexpected related to this activity.

Benefit	Larger goals	Well-being or identity	Modification of activity & substitution
Outlet to get some energy out, health and sanity, something to do over the winter, "destressor", relieve stress, compete with self, improve self, performance, able to do with dog	Part of a larger goal of maintaining physical and mental health.	Maintenance of physical and mental health	Will continue the activity in the same manner. Substitution not mentioned, stated not running would affect her mood and energy level

Participant #, age, gender, & activity	Past experience	Motivation	Emergent or unexpected experience
#32 22 year-old female Four-wheeling	While her family had always owned four-wheelers and she had ridden them growing up this was to be the first time she was going to ride them for recreation.	Something new, speed, excitement	She did not report anything unexpected related to this activity.

Benefit	Larger goals	Well-being or identity	Modification of activity & substitution
Doing something new, excitement	Continue to try new things.	"To try new things and do different things and stuff you're not comfortable with totally and yeah do things that you haven't ever done before." (pre-activity)	Will continue the activity in the same manner. Substitute with something else new to try

Participant #, age, gender, & activity	Past experience	Motivation	Emergent or unexpected experience
#33 26 year-old female Dancing	She had started dancing in high school and was currently dancing two to three times a week.	Social (conversation, meet new people, relate to all generations) exercise, global/universal skill, training for Spain year abroad, cope with winter	More "young people" were out dancing than she'd seen before. Didn't appear to have any affect on her enjoyment of the activity.

Benefit	Larger goals	Well-being or identity	Modification of activity & substitution
Experience bar dancing, learning skills, social, relate to different generations, global skill, easy to meet people	Build on dancing skills.	Contributes to identity of active, well traveled person.	Will continue the activity in the same manner. Substitute with biking and climbing though would not fulfill her social needs.

Participant #, age, gender, & activity	Past experience	Motivation	Emergent or unexpected experience
#33 26 year-old female Playing guitar	She had played guitar for just over a year and was currently playing everyday.	Global skill, can play other people's guitar without taking own instrument, meditative, get in touch with self, express emotions, creativity, practice with goal to perform	She did not expect to have the opportunity to play for other people. While she stated that this was not as enjoyable as playing for herself she did state that playing for others was a goal of hers and that she would enjoy it more if she could play better.

Benefit	Larger goals	Well-being or identity	Modification of activity & substitution
Played other people's guitar while traveling, makes poetry more powerful, performed, feedback, practiced, affecting other people, meditated on feelings and plans	"The guitar, but it began as a, as a hope to perform guitar. And I still think I'm getting there, once I actually get a song down, rather than my, my random things I make up. I would like to perform." (pre-activity)	"I like to express myself, any way I can. So guitar is just another way to express yourself." (pre-activity)	Will continue the activity in the same manner. Substitute with cleaning the house and writing poetry, though she wouldn't get as much enrichment

Participant #, age, gender, & activity	Past experience	Motivation	Emergent or unexpected experience
#33 26 year-old female Biking	She had been riding her bike for recreation for about a month and half. She was currently mountain biking once or twice a week.	Personal challenge, friendly competition, training for other activity/ event, social, transportation, wake up after work, thrill, exercise, training for work, practice	Didn't wear goggles and got "whacked in the face" and there were more dirt and bugs in the air than she expected though she reported that the activity was still enjoyable.

Benefit	Larger goals	Well-being or identity	Modification of activity & substitution
Enjoys bike itself, exploring new trails, learning new skills, thrill, less bad falls, improved skills, gained confidence, understanding bike mechanics, self reliant (to repair own bike)	Larger bike ride, accomplishment (i.e. riding greater distances or more challenging trails).	Contributes to identity of being an outside person.	Will continue the activity in the same manner. Substitute with climbing and hiking

Participant #, age, gender, & activity	Past experience	Motivation	Emergent or unexpected experience
#34 42 year-old female Biking	She had been riding her bike for recreation for about 12 years and was currently riding her bike everyday.	Exercise, fitness (built into everyday), something to do with spouse, transportation, fun "zipping" around town, better mileage, more environmental, more a part of the community, enjoying being outside, fresh air, sense of belonging, outdoors	She raced past a large piece of machinery while riding. This was a source of enjoyment.

Benefit	Larger goals	Well-being or identity	Modification of activity & substitution
Meet new people, more part of the community, more involved in the community, preservation and planning for trails	General fitness, game of how little she can dive her car, take bike out of state to ride for vacation	"I always need to exercise. It's just part of my life." (pre-activity)	Will continue the activity in the same manner. Substitute with some other non-motorized way to get to work and an activity that involves her in the community

Participant #, age, gender, & activity	Past experience	Motivation	Emergent or unexpected experience
#34 42 year-old female Reading	She had been reading for recreation for about 20 years and was currently reading between 15 minutes and an hour or more everyday.	Enjoys stories, learning, calm down, slow down, escape from regular life	She did not report anything unexpected related to this activity.
#34 42 year-old female Running	She had run only intermittently in the past because of injuries. She was currently running twice a week for the past several months with no injuries.	Show others she can run the Equinox, bragging rights surprise people recharged, restorative outdoors exercise see people, connect, social challenge	She did not report anything unexpected related to this activity.

Benefit	Larger goals	Well-being or identity	Modification of activity & substitution
Restorative, have something so think about, friends (friend recommended book), learning, interesting story, intriguing	Collection or list of great books to read.	"Yeah, it is part of who I am I think. The fact that I enjoy that pursuit." (pursuit referring to restorative nature of activity). (pre-activity)	Will continue the activity in the same manner. Substitute maybe with watching more movies
Enjoying trails, outdoors meeting people, social burnt calories improved performance i.e. went further, faster doing something new, satisfaction from doing something with her dogs	Contributes to general health, run a marathon	Identifies with being a competitive person and an athlete	Will continue the activity in the same manner. Substitution not mentioned, though would be a "major adjustment"

Participant #, age, gender, & activity	Past experience	Motivation	Emergent or unexpected experience
#34 42 year-old female Cooking (diet)	She had been cooking for about the past 20 years and was currently cooking everyday. She did view her participation in cooking as something more than a required task or chore.	Challenge, experiment, trying something new (food), learning, better athletic performance, tastes good	She did not report anything unexpected related to this activity.

Benefit	Larger goals	Well-being or identity	Modification of activity & substitution
Been able to run, lower cholesterol, supports local economy, something to do at home (sense of place?), enjoys working with hands and tasting good food, not being wasteful, something to try/eat challenge to find recipes	Vegetarian diet	"So and it's supporting of an athletic lifestyle, so yeah I think the things that I cook and the fact that I cook very much define me." (pre-activity)	Will continue the activity in the same manner. Substitution not mentioned, would not be as healthy, be away from house more

Participant #, age, gender, & activity	Past experience	Motivation	Emergent or unexpected experience
#41 31 year-old female Horses	She had ridden horses since she was a kid and was currently riding about twice a week.	Be outside, practice skills, teaching, see results with horse training, keep up with modern training techniques, gear intensive, befriending animals, thrill	She was surprised how well riding one particular horse went. She had been prepared for a "little rodeo moment". She also unexpectedly came across other horses on the trail and her behaved well. Both these occurrences resulted her being "pleasantly surprised".

Benefit	Larger goals	Well-being or identity	Modification of activity & substitution
Facilitate other people's enjoyment, successful training, nice weather, making money off horse riding (past), enjoy nature, see new areas, not having to hike, animal power, wildlife viewing, be outside, relaxing, feel comfortable in the woods, befriending animals, challenging, keep in touch visit family	Would like to keep her skills working with horses with the hopes of owning her own some day. Also mentioned participating in some endurance riding events in the future.	She grew up in hunting family and feels far more comfortable in the woods than in the city. She also stated, "that is representative of who I am, 'cause I definitely think of myself as a cowgirl first." (pre-activity)	Will continue the activity in the same manner. Substitution not mentioned, though would be "devastating"

Participant #, age, gender, & activity	Past experience	Motivation	Emergent or unexpected experience
#41 31 year-old female Dog walking	Her family had owned dogs when she was growing up. She had been walking the dog she currently owned about three times a week for the past seven years.	Fitness, loose weight, go outside, exercise dog to stay in shape for bird hunting, limit dog's neurotic behavior, see surrounding area/ new places, feel healthy and strong, stay motivated, keep up with husband, look good in bikini, decompressing, relaxing, planning	Her dog ran off in the woods barking. She thought, based on previous experience that it might have been a bear though she never saw anything. She reported that it did detract from her enjoyment because she had to cut her walk short.

Benefit	Larger goals	Well-being or identity	Modification of activity & substitution
Nice weather, be outside, exercise, dog having fun, see nature, be warned through barking, limit neurotic dog, good bird hunter, feel strong, be more effective at work	Keeping herself and her dog in shape. Did mention future hunting trips including quail hunting in the desert.	"It really contributes greatly to my quality of life. I think. Because I just feel like when I'm fit I feel so much better, and my job is pretty physical, so like when I'm strong and fit it's, it makes my life easier." (pre-activity)	Will continue the activity in the same manor though she did state she would consider bringing a gun or bear spray for protection. Substitution not mentioned, though would be "devastating"

Participant #, age, gender, & activity	Past experience	Motivation	Emergent or unexpected experience
#41 31 year-old female Riverboat	Her family had owned boats when she was growing up. This was the first river (motor) boat she had owned and was currently taking it out about once a week.	Get boat working well, harvest own food (hunting, fishing), thrill, see nature, be outside, relax	A recently purchased river boat by her and her husband unexpectedly required some work. While this did not detract from her enjoyment, she reported that backing the boat trailer into the water was "pretty stressful" because of the steep launch and "peanut gallery" of onlookers.

Benefit	Larger goals	Well-being or identity	Modification of activity & substitution
Nice weather, relax, spend time with husband, caught fish, get out further in nature without effort, makes hunting easier, shape identity, feel tough	Spend more time on the water. Move to Hawaii and own boat.	"It's a big part of my identity I think, to get to be outside and do all those fun things." (pre-activity)	Will continue the activity in the same manner. Substitution not mentioned, though would be "bummed" and would impact their lifestyle of "harvesting our animals and fish and all that"

Participant #, age, gender, & activity	Past experience	Motivation	Emergent or unexpected experience
#42 26 year-old female Cooking	She had recently spent a year abroad in France where she began cooking every night. Currently she was cooking for recreation about five times a week.	Share a skill, cook for others learning to make different things curiosity, challenge	She reported that it was a "little bit unexpected" that she used a new recipe and it didn't turn out how she expected, although this didn't appear to have any significant influence on her enjoyment.

Benefit	Larger goals	Well-being or identity	Modification of activity & substitution
Healthier, something she can share, cooking for roommates	"I'd like to expand my list of recipes I have in my head that I could make for the occasion that may happen." (pre-activity)	"I mean I can be a lot healthier and make meals with vegetables and grains and things instead of just eating prepared foods or going to a fast food restaurant and it's something I can share with other people." (pre-activity)	Will continue the activity in the same manner. Substitution not mentioned, would not affect her quality of life that much.

Participant #, age, gender, & activity	Past experience	Motivation	Emergent or unexpected experience
#42 26 year-old female Internet (Facebook)	She reported that since 2008 she has been recreationally on the internet and using Facebook. She was currently on the internet everyday.	Social connection, curiosity, learning about different things	She did not report anything unexpected related to this activity.

Benefit	Larger goals	Well-being or identity	Modification of activity & substitution
Social, keeping in touch with people, learn about interesting things & other hobbies, finding good deals, leads to interesting experiences	"It's just another way to keep learning about different things or getting ideas about different things." (pre-activity)	Social aspect, able to stay in touch with others. Also, led to opportunities outside of Alaska.	Will continue the activity in the same manner. Substitution not mentioned, would not affect her quality of life to the extent that reading or running would

Participant #, age, gender, & activity	Past experience	Motivation	Emergent or unexpected experience
#42 26 year-old female Reading	She had begun reading recreationally when she was nine and was currently reading everyday.	Attain knowledge, catch up with class mates get away from computer be present with roommates who play video games do something productive with time, accomplish-ment	She did not report anything unexpected related to this activity.

Benefit	Larger goals	Well-being or identity	Modification of activity & substitution
Something to do interesting, not to waste time while waiting for things	Read books in other languages (e.g. German, French, etc.)	"I've been reading for a long time and so I think a lot of people are used to me reading books. And it's something I would probably do anywhere in front of anybody. So I would say it's part of who I am." (pre-activity)	Will continue the activity in the same manner. Substitution mentioned, though not sure what activity, would definitely impact life

Participant #, age, gender, & activity	Past experience	Motivation	Emergent or unexpected experience
#42 26 year-old female Running	She ran cross country in junior high and has been running since then (for the past 15 years). She was currently running three times a week on average.	To get out of the house, to be outside, to be in shape (as a result of eating chocolate moose?), feel better, stay healthy	She remarked that the activity was not as enjoyable as it had been in the past because she was tired.
#43 23 year-old female Biking	She had been riding bikes a since she was three. Over the summer she was riding her bike everyday.	Exercise, showing visitors around, be outside	She did not report anything unexpected related to this activity.

Benefit	Larger goals	Well-being or identity	Modification of activity & substitution
Feel better, have more energy, being outside, having something to do by self	She has plans to run a marathon though also remarked that another goal for running was, "Just I feel healthier and so I guess that's sort of a personal plan to stay healthy."	"Again with being healthier you can have a better quality of life if you feel better and have more energy." (pre-activity)	Will continue the activity in the same manner. Substitute by "joining a gym"
Helps concentrate for studying, exercise, adrenaline rush,	Getting in shape or staying in shape is always a concern	"It always helps me concentrate later on, as long as I can get outside and do something." (pre-activity)	Will continue the activity in the same manner. Substitution not mentioned, would not impact her that much

Participant #, age, gender, & activity	Past experience	Motivation	Emergent or unexpected experience
#43 23 year-old female Hiking/ walking	She had been hiking since she was five and was currently going for a walk a everyday.	Health, be outside, show visitors, explore surroundings	She did not report anything unexpected related to this activity.

Benefit	Larger goals	Well-being or identity	Modification of activity & substitution
Enjoy surroundings, helps concentrate for studying, workout, balance with studying, change of pace, calming, comforting, be outside, showed visitors around	"I guess it was nice just to be outside, but, I mean it wasn't too strenuous at all, so it's hard to say what was too enjoyable. But, I mean, I guess just, I don't know."	"I like to think of myself as adventurous." She appeared to be satisfied with the activity because she spent time with her family, though her motivations of being outside and adventurous did not appear to be met.	Will continue the activity. Her family was in town for only one weekend so she did not intend to be a "tour guide" on future walks/hikes. Substitution not mentioned, though stated she would probably become lazy

Participant #, age, gender, & activity	Past experience	Motivation	Emergent or unexpected experience
#43 23 year-old female Knitting	She had been knitting for the past five or six years and was currently knitting everyday.	Learning skill, create, make gifts for friends, avoid boredom	She did not report anything unexpected related to this activity.
#43 23 year-old female Writing	She had been writing as a "more serious hobby" for the past two years. She was currently writing about twice a week.	Education, professional development, creativity, explore self and surroundings, challenge, keep writing/ working, self improvement practice, get ideas	She did not report anything unexpected related to this activity, though she did state that it was "a little bit more frustrating than usual"

Benefit	Larger goals	Well-being or identity	Modification of activity & substitution
Helps focus during class discussion, feel productive, creativity, mindless break	Being able to make or create things and being self sufficient	"I guess it just comes back to being able to create, and I think that I like to think of myself as a creator." (pre-activity)	Will continue the activity in the same manner. Substitute with painting, though would not be as effective for her
Feel productive, push to work harder, fulfill identity, challenge, ongoing process	She reported that she, "didn't feel like I was coming up with fresh enough ideas," although she went on to state that " It's challenging, in a good way though."	"It's representative of myself because I see myself as a poet, and so by writing I feel like I'm fulfilling that." (pre-activity)	Will continue the activity in the same manner. Substitution not mentioned, though would impact her life severely.

Participant #, age, gender, & activity	Past experience	Motivation	Emergent or unexpected experience
#44 61 year-old female Berry picking	She had been berry picking for the past 25 years.	Spend time with friends, something different to do, get out of the house, enjoy being outdoors, exercise	Was surprised that that there were still berries.
#44 61 year-old female Cooking	She had cooked her whole life though she had been cooking with her grandkids for the past nine years. She was currently cooking with them about once a week.	Healthy, better than restaurant, for grandkids to learn to enjoy it, socializing grandkids, so that grandkids can gain confidence	"No you know, when you've been cooking as long as I have, things unexpected don't usually happen." (post-activity)

Benefit	Larger goals	Well-being or identity	Modification of activity & substitution
Eating healthy food, being outside, mental health, doing something with friends, appreciation of nature	Part of a general goal of staying healthy involving doing things with her grandkids, staying active, and doing things outside.	Identifies with being a berry-picker.	Will continue the activity in the same manner. Question not asked in interview.
Learning (teaching grandkids), keeps her from being lonely, to have company, enjoys feeding people, eating moose healthier	Cooking was part of a larger goal of doing things with her grandkids and teaching them things.	This activity contributed to her identity of both living a healthy, active lifestyle and being a grandmother.	Will continue the activity in the same manner. Substitution not mentioned, though would not be as healthy or spend as much time with her grandkids.

Participant #, age, gender, & activity	Past experience	Motivation	Emergent or unexpected experience
#44 61 year-old female Crafts	Similar to cooking she had been doing crafts her whole though had been doing crafts with her grandkids for about the past five years. She was currently doing crafts with them about once a week.	To do things for other people, to do something creative	The thread kept breaking in the sewing machine. This diminished her enjoyment of the activity since her grandson could not complete the project he was hoping to. She was confident she would be able to fix the problem and he would complete the project.

Benefit	Larger goals	Well-being or identity	Modification of activity & substitution
Satisfaction in teaching grandkids	Crafts were also part of a larger goal of doing things with her grandkids and teaching them things. She also mentioned "staying busy".	Part of her identity of being a creative and social person as well as a grandparent.	Will continue the activity in the same manner. Substitution not mentioned, though would be lonely

Participant #, age, gender, & activity	Past experience	Motivation	Emergent or unexpected experience
#44 61 year-old female Photography class	She had been doing photography for the past eight years and was currently doing something related to photography (e.g. working with photographs on the computer) everyday.	Nature, being outdoors, increase knowledge	"No, it all went pretty much according to the way I thought it would go." (post-activity)

Benefit	Larger goals	Well-being or identity	Modification of activity & substitution
Learning, interesting, informative being with new people, other people focusing on one thing, having a few hours to yourself, connecting with people	She would like to be able to sell some of her photographs.	Photography contributes to her identity of being a creative person.	Will continue the activity in the same manner. Substitution not mentioned, though would be bored